This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

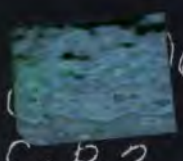
About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

Bull.
46

GENERAL INDEX
TO
PUBLICATIONS OF THE CALIFORNIA STATE MINING BUREAU

ISSUED BY
THE CALIFORNIA STATE MINING BUREAU
Lewis E. Aubury, State Mineralogist

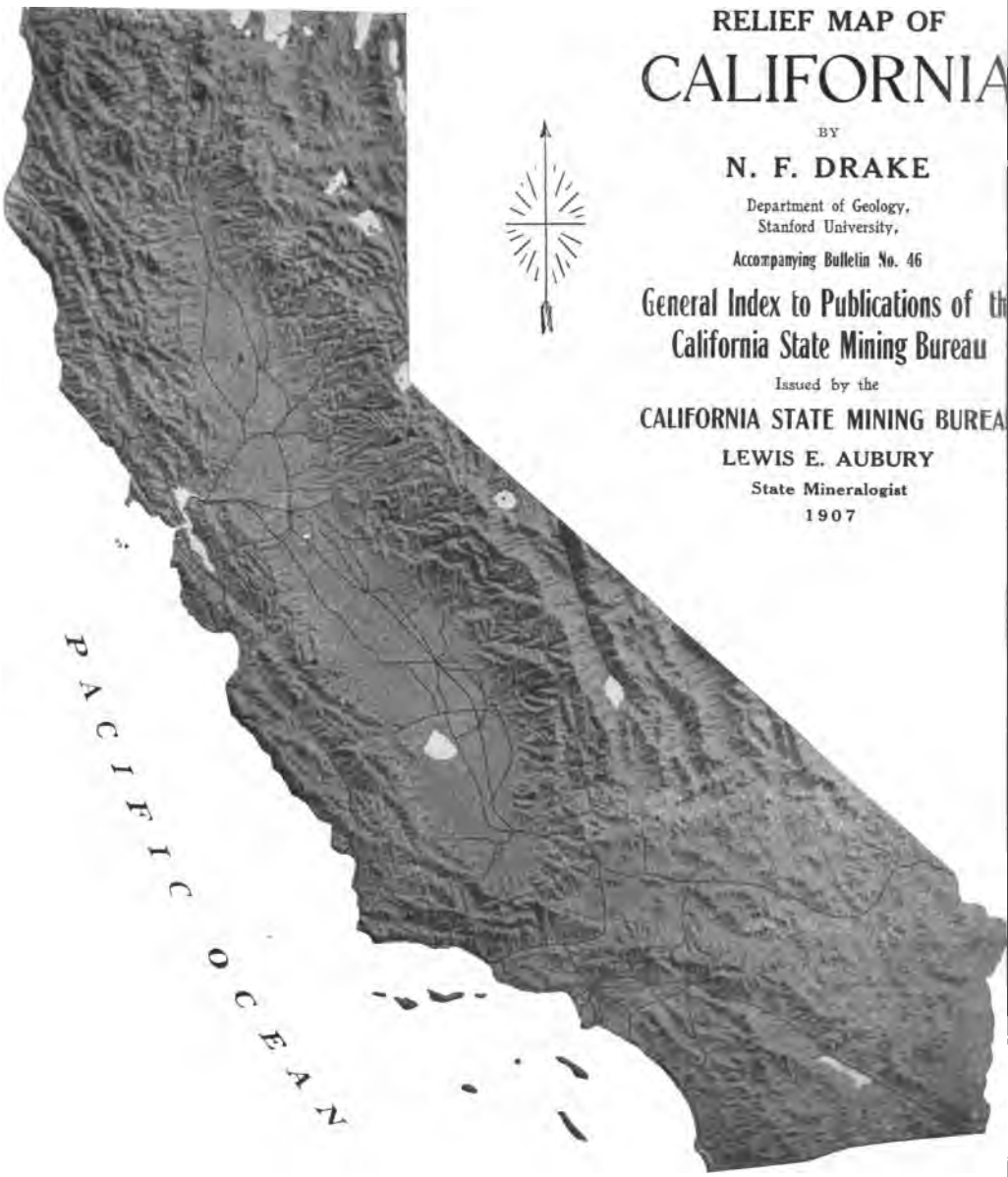


622.06
C153
cop. 2

COMPLIMENTS OF

LEWIS E. AUBURY

STATE MINERALOGIST.



RELIEF MAP OF CALIFORNIA

BY

N. F. DRAKE

Department of Geology,
Stanford University,

Accompanying Bulletin No. 46

General Index to Publications of th California State Mining Bureau

Issued by the

CALIFORNIA STATE MINING BUREA

LEWIS E. AUBURY

State Mineralogist

1907

BULLETIN No. 46 SAN FRANCISCO, JUNE, 1907

GENERAL INDEX

TO

PUBLICATIONS OF THE CALIFORNIA STATE MINING BUREAU

ISSUED BY

THE STATE MINING BUREAU

FERRY BUILDING, SAN FRANCISCO

UNDER THE DIRECTION OF

LEWIS E. AUBURY, - - STATE MINERALOGIST

SACRAMENTO:
W. W. SHANNON, - - - - - - - - SUPERINTENDENT STATE PRINTING
1907

537095

BODLEIAN LIBRARY

LETTER OF TRANSMITTAL.

To HON. J. N. GILLETT, *Governor of California, and to the Board of Trustees of the State Mining Bureau.*

GENTLEMEN: I have the honor to transmit Bulletin No. 46, "A General Index to the Publications of the State Mining Bureau."

Since the organization of the Bureau, a large number of Reports, Bulletins, Maps, etc., have been published, and in order to assist the public in a knowledge of what these publications contain, it has been deemed best to issue a bulletin of their contents.

Very respectfully,

L. E. AUBURY,
State Mineralogist.

SAN FRANCISCO, June 15, 1907.

GENERAL INDEX

TO

PUBLICATIONS OF THE CALIFORNIA STATE MINING BUREAU.

Compiled by CHARLES G. YALE.

The following index to the various Reports, Bulletins, Registers, etc., issued by the State Mining Bureau from its organization to June, 1907, is very general in its nature, not being intended to closely follow detail. It should be understood that each separate Report and Bulletin is carefully indexed in detail, such index being published with the respective volumes. Moreover, in the later Reports and in all Bulletins and Registers, subjects, mines, and counties have been arranged in alphabetical order. The names of mines, even, are alphabetically arranged in the respective counties, as are the various mineral substances. This being the case, there has been found no need for an extended detail index covering all the contents of all the publications of the Bureau. This general index is intended only to indicate in which volume special articles on various topics can be found; to give the dates of Reports and Registers; the names and numbers of Bulletins; and the names of maps printed separately, or with the text, or as folders in the volumes. The names of authors are also indexed, with the titles of the chapters, bulletins, or articles they have prepared. Where chapters have been prepared by the State Mineralogist, or his assistants, in various reports, and are merely descriptions of mines, districts, etc., and appear in alphabetical order without name of author, they are not named in this general index. All special articles having the name of the author, however, have been indexed by both title and author.

No attempt has been made to index, for instance, the chapters on gold mining, forming so large a portion of most of the Reports. Nor are the names of mines or counties indexed. These are already alphabetically arranged in the respective volumes. Those looking for records or descriptions of particular mines must seek them under the county headings in the various volumes or in the index to said volumes. By looking in the 13th Report—1896—the system adopted may be readily

understood. Since that time Bulletins on single subjects have been issued, and the contents of each have been alphabetically arranged by subject and county, and suitably indexed.

In referring to volumes in this index it is to be borne in mind that the figures following the words indicate the number of the Report; and the prefix "Bul." before a figure indicates the number of the Bulletin. For example, "Antimony, 12, 13, Bul. 38" indicates special references to this metal in the 12th and 13th Reports and in Bulletin No. 38, and the page may be found by reference to the index of said Reports and Bulletin. It does not follow, however, that antimony is nowhere else mentioned in the publications of the Bureau, because there may be a number of brief references to its occurrences in the various Reports which would be shown in the index of the Report where such reference is made. With respect to Structural and Industrial Materials, what appeared relating to them in all previous Reports and Bulletins has been incorporated in and summarized in Bulletin No. 38.

Dates of all Reports may be found after the word "Report." All Registers of Mines and Minerals in counties may be found after the word "Register"; and all maps which appear separately or with the text of Reports are alphabetically arranged under the word "Map."

A

Aaron, C. H. Finding value of specimens, 6, part 2.
Hydro-metallurgy of gold, 8.
Hydro-metallurgy of silver, 8.
Act for restraining barriers, 13.
Adams, J. M. Concentration of ores, 6, part 2.
Adobe, Bul. 38.
Alpine County, mineral deposits, 12.
Altitudes in California, 2, 6, part 2.
Ancient river-beds, Forest Hill Divide, 10.
Anderson, Winslow. Desiccated human remains, Bul. 1.
Antimony, 12, 13, Bul. 38.
Arastra, double, 13.
Argentiferous galena, 12, 13.
Armstrong, J. F. Register of mines, El Dorado County.
Asbestos, 12, 13, Bul. 38.
Asphalt, 10, 13, Bul. 16, Bul. 32.
Genesis of California, Bul. 16.
And natural gas, 7, 10, 12, Bul. 16.
Assay of gold, 2, 4.
Attwood, Melville. Milling of gold quartz, 2.
Lithology of wall rocks, 8.
Aubury, Lewis E. Copper resources of California, Bul. 23.
Aubury, Marion. Register of mines, Kern County.
Auriferous black sands of California, Bul. 45.
Auriferous gravels of California, 9, 10, 12.
Auriferous conglomerate in California, 12.
Authors of works on California mining, geology, etc., Bul. 30.

B

Bailey, G. E. Saline deposits of California, Bul. 24.
Minerals of California (printed 1902).
Register of mines, San Bernardino County.
Barriers, restraining, Act for, 13.
Baryta, 12, Bul. 38.
Bauxite in California, Bul. 38.
Beach sands. *See* BLACK SANDS.
Behr, Hans C. Mine drainage and pumps, Bul. 9.
Bell signals in mines, 12.
Bibliography of geology, paleontology, and mineral resources of California, Bul. 10; Bul. 30 (2d edition).
of salines, Bul. 24.
Bituminous rock, 12, 13.
Black sands, 1, 10, 13, Bul. 45.
Black sand tom, 13.
Blackmar, C. E. Register of oil wells, Los Angeles County.
Blake, W. P. Rare minerals, 2.
Board of Examiners, report to, 11.
Bodie mines, yield of, 8.
Boiler tests, government, Bul. 32.
Borax in California, 3, 10, 12, 13, Bul. 24.
Nevada, 3.
Borates, Bul. 24.
Bowers, Stephen. San Nicolas Island, 9.
Colorado Desert mining districts (printed 1901).
Brick-making in California, Bul. 38.
Browne, Ross E. Map of Forest Hill Divide, 10.
Ancient river-beds, Forest Hill Divide, 10.
Channel system of Harmony Ridge, 12.
Buell, J. W. Compressed air power, 13.
Building-stones of California, 6, part 1, 7, 8, Bul. 38.
Classification of, Bul. 38.
Durability of, Bul. 38.
Preservatives for, Bul. 38.
Bulletin, No. 1. Desiccated human remains. Winslow Anderson.
No. 2. Methods of mine timbering. W. H. Storms.
No. 3. Gas and petroleum yielding formations of Central Valley of California. W. L. Watts.
No. 4. Catalogue of California fossils, parts 2, 3, 4. J. G. Cooper.
No. 5. Cyanide process, application and results. A. Schiedel.
No. 6. California gold-milling practices. E. B. Preston.
No. 7. Mineral production of California, by counties, 1894. Charles G. Yale.
No. 8. Mineral production of California, by counties, 1895. Charles G. Yale.
No. 9. Mine drainage and pumps. Hans C. Behr.
No. 10. Bibliography of geology, paleontology, and mineral resources of California. A. W. Vogdes.
No. 11. Oil and gas yielding formations of Los Angeles, Ventura and Santa Barbara counties. W. L. Watts.
No. 12. Mineral production of California, by counties, 1896. Charles G. Yale.
No. 13. Mineral production of California, by counties, 1897. Charles G. Yale.
No. 14. Mineral production of California, by counties, 1898. Charles G. Yale.

Bulletin, No. 15. Map of Oil City fields, Fresno County. J. H. Means.
No. 16. Genesis of petroleum and asphalt in California. A. S. Cooper.
No. 17. Mineral production of California, by counties, 1899. Charles G. Yale.
No. 18. Mother Lode region of California. W. H. Storms.
No. 19. Oil and gas yielding formations of California. W. L. Watts.
No. 20. Synopsis reports State Mining Bureau. W. L. Watts.
No. 21. Mineral production of California, by counties, 1900. Charles G. Yale.
No. 22. Mineral production of California for fourteen years. Charles G. Yale.
No. 23. Copper resources of California. Lewis E. Aubury.
No. 24. Saline deposits of California. G. E. Bailey.
No. 25. Mineral production of California, by counties, 1901. Charles G. Yale.
No. 26. Mineral production of California for fifteen years. Charles G. Yale.
No. 27. Quicksilver resources of California. Wm. Forstner.
No. 28. Mineral production of California, by counties, 1902. Charles G. Yale.
No. 29. Mineral production of California for sixteen years. Charles G. Yale.
No. 30. Bibliography of geology, paleontology, and mineral resources of California (2d edition). A. W. Vogdes.
No. 31. Chemical analyses of California petroleum. H. N. Cooper.
No. 32. Production and use of petroleum in California. Paul W. Prutzman.
No. 33. Mineral production of California, by counties, 1903. Charles G. Yale.
No. 34. Mineral production of California for seventeen years. Charles G. Yale.
No. 35. Mines and minerals of California for 1903. Charles G. Yale.
No. 36. Gold dredging in California. J. E. Doolittle.
No. 37. Gems, jewelers' materials, and ornamental stones. George F. Kunz.
No. 38. Structural and industrial materials of California. Under direction of Lewis E. Aubury.
No. 39. Mineral production of California, by counties, 1904. Charles G. Yale.
No. 40. Mineral production of California for eighteen years. Charles G. Yale.
No. 41. Mines and minerals of California for 1904. Charles G. Yale.
No. 42. Mineral production of California, by counties, 1905. Charles G. Yale.
No. 43. Mineral production of California for nineteen years. Charles G. Yale.
No. 44. Mines and minerals of California for 1905. Charles G. Yale.
No. 45. Auriferous black sands of California. J. A. Edman.
No. 46. General index to publications of the California State Mining Bureau. Charles G. Yale.

C

Calaveras County gravel channels, 12.
Calaveras tufa, Bul. 38.
California, origin of name, 6, part 1.
State publications, Bul. 30.
Caminetti law, 12.

Canvas table, Bul. 6, Bul. 18.
Carbonates, Bul. 24.
Carbonic acid gas, 12.
Cartography of California, Bul. 30. (*See also* MAPS.)
Catalogue of Mining Bureau Library. Published 1892.
Catalogue of Mining Bureau Museum. First annual. Published 1882.
Second annual. Published 1885.
Third annual. Published 1887.
Fourth annual. Published 1890.
Fifth annual. Published 1899.
Cement, analyses of, Bul. 38.
California, 8, 9, 12, Bul. 38.
Plants in California, Bul. 38.
Tests of, Bul. 38.
Channel Islands, geology of, 9.
Channel system, Calaveras County, 12.
Forest Hill Divide, 10.
Chlorination, 6, part 2, Bul. 18.
Chrome ores, 4, 12, Bul. 38.
Chrysoprase, 13, Bul. 37.
Classification Mother Lode rocks, Bul. 18.
Clays, in California, 4, 9, 12, Bul. 38.
Composition of, Bul. 38.
High and low grade, Bul. 38.
Coal in California, 7, 12, 13.
Coal burners, converting to oil, Bul. 32.
Coast Range copper deposits, Bul. 23.
Coining precious metals, 8.
Colorado Desert, 10.
Colorado Desert Mining District. Stephen Bowers. Printed 1901.
Colusa County, geology of, 11.
Combustion of petroleum, Bul. 32.
Compressed air as motive power, 13.
Transmission at North Star mine, 13.
Comstock ore sampling, 13.
Concentration of ores, 6, part 2.
Concentrating quicksilver ores, Bul. 27.
Concrete rock, Bul. 38.
Condensers for quicksilver, Bul. 27.
Conveyor reel, 13.
Cooper, A. S. Genesis of petroleum and asphalt in California, Bul. 16.
Cooper, H. N. Chemical analyses of California petroleum, Bul. 31.
Cooper, J. G. Catalogue of California fossils, 7, Bul. 4.
Fossils as indicating minerals, 9.
Copper in California counties, 12, 13, Bul. 23.
California, historical notes on, Bul. 23.
Resources of California, Bul. 23.
Costs of dredging, Bul. 36.
of mining on Mother Lode, Bul. 18.
County mine registers. *See* REGISTERS.
County maps. *See* MAPS.
Current wheels, 13.
Cyanide process, 10, Bul. 5.
Application and results, Bul. 5.

D

Davidson, A. V. Register of mines, Inyo County.
Davidson, J. M. Register of mines, Siskiyou County.
Debris Commissioner Act, 12.

DeGroot, Henry. Hydraulic mining, 2.
Glass manufacture in California, 9.
Drift mining, 2.
Searles borax marsh, 10.
Beach sands, 10.
Desert springs, list of, Bul. 24.
Diamonds in California, 2, 4, 13, Bul. 37.
Diatomaceous earth, *See* INFUSORIAL.
Diestelhorst dredge, 13, Bul. 36.
Distances, legal, in California, 6, part 2.
Ditches, mining, 9, 10.
Dittmar, M. E. Register of mines, Shasta County.
Doolittle, J. E. Gold dredging in California, Bul. 36.
Dredge, Diestelhorst, 13, Bul. 36.
Dredging in California, history of, Bul. 36.
Cost of, Bul. 36.
Horse power registered, Bul. 36.
Records and data, Bul. 36.
Dredging districts of California, Bul. 36.
Dredging gravels, area of, Bul. 36.
Drier for ores, 13.
Drift mining, 2, 8, 10.
Dunn, R. L. Drift mining, 8.
River mining, 9.
Auriferous conglomerate in California, 12.

E

Earthquake, Owens Valley, 8.
Edman, J. A. Register of mines, Plumas County.
Auriferous black sands of California, Bul. 45.
Electric power transmission, 12.
Elevation in California deserts, Bul. 24.
Of quicksilver mines, Bul. 27.
Emery, 12.
Ethnology, Pacific Slope, 2.

F

Fairbanks, H. W. Geology of Colusa County, 11.
Geology of El Dorado County, 12.
Geology of Lake County, 11.
Geology of Monterey County, 12.
Geology of Napa County, 11.
Geology of San Bernardino County, 11.
Geology of San Benito County, 12.
Geology of San Diego County, 11.
Geology of San Luis Obispo County, 12.
Geology of Santa Barbara County, 12.
Geology of Shasta County, 11.
Geology of Tehama County, 11.
Geology of Ventura County, 12.
Geology of Mother Lode region, 10.
Geological map of Orange County, 11.
Geological map of Shasta County, 11.
Geological map of Trinity County, 10.
Geological map of Red Rock District, 12.
Geological map of Goler District, 12.
Geological map of Summit District, 12.
Mineral deposits of Inyo, Mono, and Alpine counties, 12.
Fertilizers, Bul. 24.

Fineness of California gold, 4.
Fireboxes for oil fuel, Bul. 32.
Foote, A. D. Power transmission, North Star mine, 13.
Forest trees of California, 2.
Forstner, Wm. Quicksilver resources of California, Bul. 27.
Fossils, Bibliography and references, Bul. 4.
Catalogue of California, 7, Bul. 4.
Indicating mineral deposits, 9.
List of, Bul. 11.
New species of California, Bul. 11.
In Orange County, Bul. 4.
French chalk, 13.
Fuel oil in locomotives, Bul. 32.
Miners' use of, Bul. 32.
In steamships, Bul. 32.
Value in California, Bul. 19, Bul. 32.
Fuller's earth, Bul. 38.
Furnace, McDougal roasting, Bul. 27.
Quicksilver, Bul. 27.

G

Gas-making, petroleum in, Bul. 32.
Gems in California, Bul. 37.
in California, where found, Bul. 37.
Properties of, Bul. 37.
Gem minerals, California, distribution of, Bul. 37.
Gem mining, historical outline of, Bul. 37.
Geology of Channel Islands, 9.
of copper belt of Shasta County, Bul. 23.
of dredging areas, Bul. 36.
of El Dorado County, 12.
of Madera and Mariposa counties, 12.
of Monterey County, 12.
of Mother Lode gold belt, 10, Bul. 18.
of Mother Lode in El Dorado County, 13.
of oil districts, Bul. 19.
of Pacific Slope, 2.
of San Benito County, 12.
of San Luis Obispo County, 12.
of Santa Barbara County, 12.
of Shasta County, 11.
of Ventura County, 12.
Geologists of California, State, 4.
Geological history of salines, Bul. 24.
Geological surveys of California, 4, 9.
Geological and Geographical Survey reports, Bul. 30.
Glass manufacture in California, 9, Bul. 38.
Glossary of mining terms, 2.
Gold, assay of, 2, 4.
Belt Mother Lode, division of, Bul. 18.
Discoveries in California, early, 4.
Fineness of California, 4.
Hydro-metallurgy of, 8.
Microscopic slides of, 3.
Mines in California, yield per ton, 4.
Mill practices in California, Bul. 6.
Ores, milling. *See* MILLING.
Ores, mining, 10.
In ore, testing amounts of, 5, 6, part 2, 12.
In tailings, 3.

Goler District, 12.
Goodyear, W. A. Coal in California, 7.
Earthquake, Owens Valley, 8.
History Mount Whitney, 8.
Island of Santa Cruz, 9.
Granite, 12, Bul. 38.
Graphite, 13.
Gravels, auriferous. *See* AURIFEROUS.
Great Basin, Bul. 24.
Gumbinner, J. Refining precious metals, 8.

H

Hammond, John Hays. Milling of gold ores in California, 8.
Mining of gold ores in California, 10.
Auriferous gravels of California, ~~10.~~ 9
Hammond, R. P. Location of mines, 10.
Hanks, Henry G. Borax in California, 3.
Hanksite, 5.
Harris, Lew B. Register of mines, Santa Barbara County.
Register of mines, Yuba County.
Hasson, W. F. C. Electric transmission, 13.
Hilgard, E. W. Asphalt in Ventura County, 10
Hobson, John B. Banner Mountain District (with map), 10.
Duncan Hill District (with map), 10.
Nevada County (with map), 10.
Placer County (with map), 10.
Ophir District (with map), 10.
Iowa Hill Divide (with map), 10.
Santa Maria River (with map), 10.
Water resources, Nevada County (with map), 10.
Hubon, I. A. Register of mines, San Diego County.
Human remains, desiccated, Bul. 1.
Hydraulic ejectors, 11.
Hydraulic mining, 2, 9, 10, 13.
Act defining, 12.
Caminetti law, 12.
Hydraulic mines, rock conveyor for, 13.
Hydraulics, practical, 6, part 2.
Hydro-metallurgy of gold, 8.
Of silver, 8.

I

Infusorial earth, 2, 12, 13, Bul. 38.
Insular flora, 9.
Irelan, Linna. Pottery in California, 9.
Irelan, William, Jr. Chlorination, 6, part 2.
Iron, Fresno County, 10.
In California, 2, 4, 5, 10, 12, 13, Bul. 38.
Isaacs, John D. Preservation of structural timbers, 13.

J

Johnson, Wm. Clays in California, 9.
Cyanide process, 10.

K

Kellogg, A. Forest trees of California, 2.
Kirby, E. B. Sampling and measuring ore bodies, 13.
Keyes, W. S. Western lead smelting, 8.

Kunz, George F. Gems, jewelers' materials, and ornamental stones of California, Bul. 37.

L

Lake County, geology, 11.
Law, dissertation on American mining, 11.
Lead in California, 4.
Smelting, 8, 10.
Leggett, T. H. Electric transmission in mining, 12.
Library catalogue of the Mining Bureau. Printed 1892.
Limestone in California, 4, 12, Bul. 38.
Limekilns, Bul. 38.
Lithia in California, Bul. 38.
Lithology of wall rocks, 8.
Location of mines, 10.
Locomotive fuel tests, Bul. 32.
Liquid fuel for, Bul. 32.
Lowden, W. S. Register of Mines, Trinity County.

M

Macadam, 12, Bul. 38.
Madera County, geology of, 12.
Madeira, George. Register of Mines, Lake County.
Magnesite, 12, 13, Bul. 38.
Manganese, 12, 13, Bul. 38.
Map, Alpine, Mono, and Inyo counties, Bul. 44.
Amador County (*with Register of Mines of county,* 1903).
Anacapa Island, Bul. 1.
Asphaltum claims of Asphalto, Bul. 3.
Banner Mountain, Nevada County, 10.
Borax deposits, California and Nevada, 3, Bul. 24.
Butte County (*with Register of Mines of county,* 1903).
Butte and Plumas counties, Bul. 44.
Calaveras County (*with Register of Mines of county,* 1899).
California (see list in Bul. 30), and with 10th Report.
Central Valley of California, Bul. 3.
Channel system, Calaveras County, 12.
Channel system, Forest Hill Divide, 10.
Channel system, Harmony Ridge, 12.
Conglomerate deposits, Calaveras County, 12.
Conglomerate deposits, Siskiyou County, 12.
Coalinga oil fields, Bul. 32.
Cross-section Santa Paula cañon, Bul. 11.
Del Norte and Siskiyou counties, Bul. 44.
Dredging lands on Feather river, Bul. 36.
Dredging lands in Folsom district, Bul. 36.
El Dorado County (*with Register of Mines of county,* 1902), and Bul. 44.
Forest Hill Divide, 10.
Forest reserves in California, issued 1907.
Fullerton oil field, Bul. 32.
Geological. *See* MAP, GEOLOGICAL.
Georgetown Divide, 11.
Golden Feather channel, 11.
Green Mountain Group Copper Mines, Bul. 23.
Gold mines near Grass Valley, 10.
Humboldt and Trinity counties, Bul. 44.
Iowa Hill Divide, 10.
Inyo County (*with Register of Mines of county,* 1902).

Maps—*Continued.*

Island City Copper Mines, Bul. 23.
Julian District, San Diego County, 6, part 1.
Kern County (*with Register of Mines of county*, 1904), and Bul. 44.
Kern River oil fields. *See Kern County Register of Mines.*
King, Tulare, and Kern counties, Bul. 44.
Lake County (*with Register of Mines of county*, 1901).
Lassen County, Bul. 44.
Lake Aubury, Bul. 24.
Lake LeConte, Bul. 24.
Los Angeles oil fields, Bul. 32.
Los Angeles and Orange counties, Bul. 44.
Los Alamos oil field. *See Santa Barbara County Register of Mines.*
Madera and Fresno counties, Bul. 44.
Mariposa County (*with Register of Mines of county*, 1903).
Mendocino, Lake, Glenn, and Colusa counties, Bul. 44.
Modoc and Lassen counties, Bul. 44.
McKittrick oil fields, Bul. 32. *See Kern County Register of Mines.*
Midway oil fields, Bul. 32. *See Kern County Register of Mines.*
Mineral and Relief of California. Printed 1904.
Mother Lode region, 10, reprinted 1906.
Mother Lode belt of El Dorado County, 13.
Mojave Desert Dry Lakes, Bul. 24.
Mineral Hill Group of Mines, Bul. 23.
Monterey and San Benito counties, Bul. 44.
Nevada County (*with Register of Mines of county*, 1898).
Newhall oil field, Bul. 32.
Placer and El Dorado counties, Bul. 44.
Placer County (*with Register of Mines of county*, 1902).
Petroleum districts of California, Bul. 32.
Puente oil field, Bul. 32.
Oil claims near Coalinga, Bul. 3.
Oil City fields, Fresno County, Bul. 15.
Ophir and Duncan Hill Districts, 10.
Plumas County (*with Register of Mines of county*, 1898).
Riverside and San Diego counties, Bul. 44.
Relief of California, Bul. 23. Printed 1904.
Sacramento, San Joaquin, Amador, and Calaveras counties, Bul. 44.
Saline deposits of California, Bul. 24.
San Bernardino County (*with Register of Mines of county*, 1902), and Bul. 44.
San Bernardino Mountains (*with Register of Mines of county*, 1902).
San Diego County (*with Register of Mines of county*, 1902).
San Francisco, San Mateo, Santa Clara, and Alameda, Bul. 44.
San Luis Obispo County, Bul. 44.
Santa Barbara County (*with Register of Mines*, 1906).
Santa Barbara and Ventura counties, Bul. 44.
Santa Cruz Island, Bul. 1.
Santa Maria oil fields, Bul. 32.
Shasta County, geological, 11.
Shasta County (*with Register of Mines of county*, 1902).
Shasta and Tehama counties, Bul. 44.
Sierra County (*with Register of Mines of county*, 1903).
Sierra City mines, 10.
Siskiyou County (*with Register of Mines of county*, 1898).
Sonoma, Marin, Napa, and Solano counties, Bul. 44.
Stanislaus, Merced, Tuolumne, and Mariposa counties, Bul. 44.
Sulphur Creek District, Bul. 27.
Summerland oil fields. *See Santa Barbara County Register.*

Maps—*Continued.*
Sunset oil claims, Bul. 3.
Sunset oil fields, Bul. 32.
Sutter, Yuba, and Sierra counties, Bul. 44.
Trinity County (*with Register of Mines of county*, 1898), 10.
Tulare County, Bul. 44.
Tuolumne County (*with Register of Mines of county*, 1902).
Ventura oil fields, Bul. 32.
Whittier oil fields, Bul. 32.
Yuba County (*with Register of Mines of county*, 1905).
Map, Geological, Amador County. *See Register of county.*
California, with 10th Report.
East and Central Shasta County, copper belt, Bul. 23.
El Dorado County. *See Register of county.*
Foothills of Santa Ana Mountains, Bul. 19.
Gravel channels near Placerville, 12.
Granite outcroppings in California, Bul. 38.
Los Angeles County, Bul. 11.
Los Angeles oil fields, Bul. 19.
Mariposa County. *See Register of Mines of county.*
Napa, Sonoma, and Lake counties, Bul. 27.
Napa, Sonoma, and Lake quicksilver districts, Bul. 27.
Nevada County, 10.
Oil districts, Santa Barbara County, Bul. 11.
Orange County, southeast portion, Bul. 19.
Placer County, 10.
Peninsula of San Pedro, Bul. 19.
Puente Hills (relief), Bul. 19.
Puente Oil Fields, Bul. 11.
San Diego, Orange, and San Bernardino counties, 11.
Shasta County, 11.
Shasta County copper belt, western part, Bul. 23.
Sierra County. *See Register of Mines of county*, 1903.
Territory between Los Angeles and Santa Ana Mountains, Bul. 19.
Territory between Sespe and Piru creeks, Bul. 19.
Tuolumne County. *See Register of Mines of county*, 1903.
Ventura County oil deposits, Bul. 11.
West Los Angeles County, Bul. 11.
Yuba County. *See Register of Mines of county*, 1905.
Mariposa County, geology of, 12.
Marble, 12, Bul. 38.
Distribution in California, Bul. 38.
McGillivray, J. D. Comstock ore sampling, 13.
McLaughlin, R. P. Register of Mines, Tuolumne County, 1903.
Means, J. H. Map of Oil City Field, Bul. 15.
Metallurgy of quicksilver, Bul. 27.
Meteorites, 10.
Mica, 2, Bul. 38.
Microscopic slides of gold, 3.
Mills, discharge of, Bul. 6, Bul. 18.
Specifications for, 6, part 2.
Weight of quartz, 6, part 2.
Mill screen frames, Bul. 6, Bul. 18.
Miller, W. P. Map of Trinity County, 10.
Milling of gold ores, 2, 8.
Milling practices, gold, Bul. 6.
Mine bell signals, 12.

Mine drainage, 6, part 2.
And pumps. H. C. Behr, Bul. 9.
Mine timbering, methods of, Bul. 2.
Minerals of California, 4, 5, 6, part 1, 11.
Mineral lands in railroad grants, 10.
Mineral production of California. *See* BULLETINS.
Mineral paint, 12, 13, Bul. 38.
Mineral products of United States, 6, part 2.
Mineral resources Western States, Bul. 30.
Minerals, rare, in California, 2.
Mineral springs of California, 6, part 1; 12; 13.
Mineralogists of California, 4.
Mineralogy of carbonates, Bul. 24.
Mining Bureau, Act, 12.
Exhibit, New Orleans, 5.
Library catalogue. *See* CATALOGUE.
Museum catalogue. *See* CATALOGUE.
Origin of, first Report.
Publications. *See* BULLETIN 30 and BULLETIN 46.
Maps. *See* BULLETIN 30 and BULLETIN 46.
Trustees Report. (*See first pages of each report, and Bul. 20.*)
Mining canals, 13.
Mining, Costs on Mother Lode, 18.
Gold ores in California, 10.
Laws, 6, part 2; 11.
Machinery on Mother Lode, Bul. 18.
Methods on Mother Lode, 18.
Terms, glossary of, 2.
Mollusca of Channel Islands, 9.
Mono County, mineral deposits, 12.
Mother Lode region of California, 18.
Map, 10, re-published 1896.
Ore deposits, 13.
Mount Whitney, 8.

N

Napa County, geology, 11.
National Museum, proceedings, Bul. 30.
Natural gas, 7, 10, 12, Bul. 3, 13.
Nevada County, water resources, 10.
New Almaden quicksilver product, Bul. 27.
New Orleans, Mining Bureau exhibit, 5.
Niter in California, Bul. 24.
In Chile, Bul. 24.
Nitrates, Bul. 24.
Chemistry of, Bul. 24.
North, Edward. Pico Cañon Oil Field, 10.
North Star Mine power transmission, 13.

O

Ocean beach sands. *See* BLACK SANDS.
Oil. *See* PETROLEUM.
Oil and gas yielding formations of Los Angeles, Ventura, and Santa Barbara counties, Bul. 11.
Oiled roads, Bul. 32.
Onyx, 12, Bul. 38.
Orange County, geology, 11.

Orcutt, C. R. Colorado Desert, 10.
Ore bodies, sampling and measuring, 13.
Ore deposits on Mother Lode, 13.
Quicksilver, Bul. 27.
Quicksilver, genesis of, Bul. 27.
Ore sampling, 13.
Ore testing for gold, 5, 6, part 2.
Owens Lake, Bul. 24.

P

Parker, I. Register of Mines, Placer County.
Paul, A. B. Flour gold, 2.
Paving blocks, 12, Bul. 38.
Pectolite, 12.
Penniman, W. H. H. Register of Mines, Calaveras County.
Petroleum and asphalt in California, Bul. 16.
California, chemistry of, Bul. 31, Bul. 32.
California, history of, 4, Bul. 32.
Combustion of, Bul. 32.
Districts of California, Bul. 32.
Evaporation tests, Bul. 32.
Fields of California, 10, 12, 13, Bul. 3, Bul. 19, Bul. 32.
Fuel values of, Bul. 19, Bul. 32.
As fuel in Los Angeles, 13.
Genesis of, Bul. 16.
Geology of fields, Bul. 19, Bul. 32.
In gas-making, Bul. 32.
And gas-yielding formations in Central Valley, Bul. 3, Bul. 19.
History of production in California, Bul. 32.
Production and use of, in California, Bul. 32.
Storing and heating, Bul. 32.
Using vessels, Bul. 32.
Refining, Bul. 13, Bul. 19, Bul. 32.
Wells, cost of, Bul. 32.
Wells, production of, Bul. 19, Bul. 32.
Yielding formations, Bul. 19, Bul. 32.
Pico Canyon oil field, 10.
Pipe lines, Bul. 19.
Platinum, 12, 13, Bul. 38.
Pottery in California, 9.
Preston, E. B. Golden Feather channel, 11.
Salton Sea, 11.
Gold mill practices, Bul. 6.
Producer gas, 10.
Prutzman, Paul W. Production and use of petroleum in California, Bul. 32.

Q

Quartz crystals, Bul. 38.
Quartz mills, weight of, 6, part 2.
Quicksilver deposits of California, 4, 10, 12, 13, Bul. 27.
Quicksilver furnaces, Bul. 27.
Quicksilver resources of California, Bul. 27.

R

Railroad explorations and surveys, Bul. 30.
Randall, P. M. Practical hydraulics, 6, part 2.
Randol, J. B. Quicksilver mining, 10.
Red Rock District, 12.

Refining and coining precious metals, 9.
Refineries, oil, in California, Bul. 19, Bul. 32.
Register of Mines and Minerals, Amador County. J. B. Tregloan. Prepared 1903.
Butte County. W. E. Thomas. Prepared 1903.
Calaveras County. W. H. H. Penniman. Prepared 1899.
El Dorado County. J. F. Armstrong. Prepared 1902.
Inyo County. A. V. Davidson. Prepared 1902.
Kern County. Marion Aubury. Prepared 1904.
Lake County. George Madeira. Prepared 1901.
Mariposa County. E. M. Wilkinson. Prepared 1903.
Nevada County. Charles E. Uren.
Placer County. I. H. Parker. Prepared 1902.
Plumas County. J. A. Edman. Prepared 1898.
San Bernardino County. G. E. Bailey. Prepared 1902.
San Diego County. I. A. Hubon. Prepared 1902.
Santa Barbara County. Lew B. Harris. Prepared 1906.
Shasta County. M. E. Dittmar. Prepared 1902.
Sierra County. Geo. F. Taylor. Prepared 1903.
Siskiyou County. J. M. Davidson. Prepared 1898.
Trinity County. W. S. Lowden. Prepared 1898.
Tuolumne County. R. P. McLaughlin. Prepared 1903.
Yuba County. Lew B. Harris. Prepared 1905.
Register of oil wells of Los Angeles County. C. E. Blackmar. Prepared 1903.
Reports of Secretary of War, Bul. 30.
Reports of State Mineralogist. First. Henry G. Hanks. Published 1880.
Second. Henry G. Hanks. Published 1882.
Third. Henry G. Hanks. Published 1883.
Fourth. Henry G. Hanks. Published 1884.
Fifth. Henry G. Hanks. Published 1885.
Sixth, part 1. Henry G. Hanks. Published 1887.
Sixth, part 2. Wm. Irelan, Jr. Published 1887.
Seventh. Wm. Irelan, Jr. Published 1888.
Eighth. Wm. Irelan, Jr. Published 1888.
Ninth. Wm. Irelan, Jr. Published 1890.
Tenth. Wm. Irelan, Jr. Published 1890.
Eleventh. Wm. Irelan, Jr. Published 1893.
Twelfth. J. J. Crawford. Published 1894.
Thirteenth. J. J. Crawford. Published 1896.
Resources of California, 4.
Restraining barriers Act 4, 13.
Ricketts, A. H. History of American mining law, 11.
Riffle bars, steel, 13.
River mining, 9.
Roads, oiled, Bul. 32.
Roasting furnace, McDougal, Bul. 23.
Robinson, F. W. Hydraulic mining, 2.
Roscoelite, 2.
Rowlands, R. Gravel channels near Placervilie. 12.
Rubble, Bul. 38.
Russell process, 8.

S

Salathe, F. Refining petroleum, 13.
Salt in California, 2, 12, 13, Bul. 24.
Salton Sea, 11, Bul. 24.
Sampling and measurement of ore bodies, 13.
San Bernardino, geology, 11.
San Diego County, 6, part 1.
Geology, 11.

San Joaquin Valley, 19.
San Nicolas Island, 8.
Sandstone in California, 12, Bul. 38.
Santa Cruz Island, 9.
Santa Maria River, 10.
Scientific Society Publications, Bul. 30.
Schiedel, A. Cyanide process, Bul. 5.
Searles Borax Marsh, 10, Bul. 24.
Serpentine in California, Bul. 38.
Shasta County, geology, 11.
Shells, West N. American. J. G. Cooper. Printed 1894.
Sierra Nevada copper belt, Bul. 23.
Silver in California, 4, 12.
Hydro-metallurgy of, 8.
Slate in California, Bul. 38.
Slime plants, Bul. 18.
Smithsonian Institution, reports, Bul. 30.
Soapstone, 12, Bul. 38.
Soda, 12, 13, Bul. 24.
Soot-cleaning machines, Bul. 27.
Southern and Eastern copper deposits, Bul. 23.
Specimen, finding value of, 6, part 2; 12.
Specifications for 20-stamp mill, 6, part 2.
Springs containing borates, Bul. 24.
Desert, Bul. 24.
Siskiyou County, 11.
Statistical bulletins. *See* BULLETINS.
State Geological Society, 1.
State Geological Surveys, Bul. 30.
Steam shovel, 13.
Steatite, 13, Bul. 38.
Stetefeldt on producer gas, 10.
Stone, Artificial, Bul. 38.
Stones, Building, of California, Bul. 38.
Storms, W. H. Ancient channels in Calaveras County, 12.
Conglomerate deposits, Calaveras County, 12.
Geology of Madera County, 12.
Geology of Mariposa County, 12.
Methods of mine timbering, Bul. 2.
Mother Lode ore deposits, 13.
Mother Lode region of California, Bul. 18.
Structural and industrial materials of California, Bul. 38.
Structural materials, 13, Bul. 38.
In Bureau Museum, Bul. 38.
Sulphur in California, 4, 13; Bul. 38.
Summit Districts, 12.
Surveyor-General's reports, Bul. 30.

T

Tailings, gold in, 3.
Samples, 13.
Washing, 13.
Taylor, George F. Register of Mines and Minerals, Sierra County.
Tehama County, geology of, 11.
Thomas, F. F. Waterwheels, 8.
Thorne, W. E. Register of Mines and Minerals, Butte County.
Timbering of mines, Bul. 2, Bul. 18.
Timber, preservation of, 13.

Tons for beach sands, 13.
Trachyte, 13, Bul. 38.
Travertine, 12, Bul. 38.
Tregloan, J. B. Register of Mines and Minerals. Amador County.
Tufa, 12, Bul. 38.
Tungsten, Bul. 38.

U

University of California, publications, Bul. 30.
United States Census Reports, Bul. 30.
Coast Survey Reports, Bul. 30.
Government publications, Bul. 30.
Geological Survey Reports, Bul. 30.
Mint Reports, Bul. 30.
Navy Reports, Bul. 30.
Uren, Charles. Register of Mines and Minerals, Nevada County.

V

Vogdes, A. W. Bibliography of geological, paleontological, and mineral resources of California, Bul. 10, Bul. 30.
Volcanic rocks, 12.
Volcanoes, 2.
Von Petersdorff, F. C. Lead smelting, 10.
Meteorites, 10.

W

Wall rocks, lithology of, 8.
Wasson, Joseph, death of, 3.
Water blast, 13, Bul. 11.
And reflector, Bul. 11.
Water power, and compressed air transmission, 13.
Water resources, Nevada County, 10.
Waterwheels, 8.
Watts, W. L. Gas and oil yielding formations of Central Valley of California, Bul. 3.
Mineral springs of Siskiyou County, 11.
Oil as fuel in Los Angeles County, 12.
Oil and gas yielding formations of Los Angeles, Ventura, and Santa Barbara counties, Bul. 11.
Oil and gas yielding formations of California, Bul. 19.
Synopsis general report of Mining Bureau, Bul. 20.
Wheelan, F. H. Gas wells at Summerland, 10.
Whitney, Mount, 8.
Wilkinson, E. M. Register of Mines and Minerals, Mariposa County.
Willey, H. J. Geological Surveys of California, 9.
Wiltsee, E. A. Hydraulic ejectors, 11.
World's Fairs, 5.

Y

Yale, Charles G. Mine drainage, 6, part 2.
Report to Board of Examiners, 11.
Mineral production of California by counties, 1894, Bul. 7.
Mineral production of California by counties, 1895, Bul. 8.
Mineral production of California by counties, 1896, Bul. 12.
Mineral production of California by counties, 1897, Bul. 13.
Mineral production of California by counties, 1898, Bul. 14.
Mineral production of California by counties, 1899, Bul. 17.
Mineral production of California by counties, 1900, Bul. 21.
Mineral production of California for fourteen years, Bul. 22.

Yale, Charles G. Mineral production of California by counties, 1901, Bul. 25.
Mineral production of California for fifteen years, Bul. 26.
Mineral production of California by counties, 1902, Bul. 28.
Mineral production of California for sixteen years, Bul. 29.
Mineral production of California by counties, 1903, Bul. 33.
Mineral production of California for seventeen years, Bul. 34.
California mines and minerals, 1903, Bul. 35.
Mineral production of California by counties, 1904, Bul. 39.
Mineral production of California for eighteen years, Bul. 40.
California mines and minerals, 1904, Bul. 41.
Gold production of California from 1848 to 1904.
Mineral production of California by counties, 1905, Bul. 42.
Mineral production of California for nineteen years, Bul. 43.
California mines and minerals, 1905, Bul. 44.
General index to publications of the California State Mining Bureau, Bul. 46.
Yates, L. G. Geology of Channel Islands, 9.
Insular flora, 9
Mollusca of Channel Islands, 9.
Yield per ton of California gold mines, 4.

Z

Zinc in California, Bul. 38.

CONTENTS OF PUBLICATIONS CALIFORNIA STATE MINING BUREAU, ISSUED BY THE DIFFERENT STATE MINERALOGISTS.

HENRY G. HANKS,

State Mineralogist from May, 1880, to May, 1886.

First Annual Report of the State Mineralogist, from June 1, 1880, to December 1, 1880. Sacramento, 1880. 43 pp.

Origin of Bureau.
State Geological Society.
Black sands.

Second Annual Report of the State Mineralogist, from December 1, 1880, to October 1, 1882. Sacramento, 1882. 288 pp. in main report and 226 pp. in appendix; total, 514 pp. 4 illustrations. One map of mud volcanoes.

Hydraulic mining.
Drift mining.
Assay of gold.
Iron ores of California.
Beach sands.
Salt in California.
Mud volcanoes of Colorado Desert.
Diamonds in California.
Mica.
Roscoelite.
Diatomaceous earth.
Geology and ethnology of the Pacific Slope.
Glossary of mining terms.
Rare minerals recently found in the State, by W. P. Blake. (Appendix.)*
On the milling of gold quartz, by Melville Attwood. (Appendix.)*
Forest trees of California, by Dr. A. Kellogg. (Appendix.)*
Notes on hydraulic mining, by F. W. Robinson. (Appendix.)*
Hydraulic and drift mining, by H. DeGroot. (Appendix.)*
Flour gold, by A. B. Paul. (Appendix.)*

Catalogue of the State Museum of California, Vol. I, being the collections made by the State Mining Bureau for the year ending April 16, 1881. Sacramento, 1882. (Revised and reprinted 1888.) 220 pp.

* These papers appear to have been originally printed separately, and then bound together in the Second Report as an appendix.

Third Annual Report of the State Mineralogist for the year ending June, 1883. Sacramento, 1883. 111 pp. 21 illustrations.

Part I. Condition of Bureau.
Death of Joseph Wasson.
Gold in tailings.
Microscopic slides alluvial gold.

Part II. Borax deposits of California and Nevada. Report says (p. 8) a map of borax deposits of both states is published, but it is *not* found in said report.

Fourth Annual Report of the State Mineralogist, for the year ending May 15, 1884. Sacramento, 1884. 410 pp. 7 illustrations.

History of Geological Surveys of California.
Names of State Geologists and Mineralogists.
Resources of California.
History of early gold discoveries in California.
Catalogue and description of minerals of California, with descriptions and localities alphabetically arranged.
Table of fineness of California gold.
Iron ores of California.
History of petroleum in California.
Quicksilver deposits of California.
Silver in California.
Sulphur in California.
Lime and limestone in California.
Chrome ores.
Clays of California.
Diamonds in California.
Gold, assaying.
Lead in California.

Fifth Annual Report of the State Mineralogist, for the year ending May 15, 1885. Sacramento, 1885. 234 pp. 15 illustrations. 1 geological map. 4 sections of San Diego, Orange and San Bernardino counties.

The report gives an account of the State Mining Bureau's exhibit at the New Orleans Exposition, and notes with reference to exhibits from other States.
Hanksite.
Minerals of California.
World's fairs or expositions.
Testing quantity of gold in ore.
Iron ores in California.

Catalogue of State Museum of California, Vol. II, being collections made by the State Mining Bureau from April 16, 1881, to May 15, 1884. Sacramento, 1885. 220 pp.

Sixth Annual Report of State Mineralogist, for the year ending June 1, 1886. Part I. Sacramento, 1886. 145 pp. 3 illustrations. 1 sketch map Julian District, San Diego County.

Building stones of California.
Table of altitudes of California.
Mineral springs of California, with analyses.
San Diego County.
List of California minerals, with descriptions.
Origin of name "California."

WILLIAM IRELAN, Jr.,

State Mineralogist from June, 1886, to February, 1893.

Sixth Annual Report of the State Mineralogist, for the year ending June 1, 1886. Part II. Sacramento, 1887. 222 pp. 36 illustrations.

Review by counties.
Mine drainage, by Charles G. Yale.
Weight of quartz mills.
Specifications for 20-stamp mill.
Concentration of ores, by J. M. Adams.
Chlorination, by Wm. Irelan, Jr.
Mineral products of the United States.
United States mining laws.
Finding value of a specimen, by C. H. Aaron.
Tables on practical hydraulics, by P. M. Randall.
Legal distances in State.

Catalogue of the State Museum of California, Vol. III, being the collections made by the State Mining Bureau from May 15, 1884, to March 31, 1887. Sacramento, 1887. 195 pp.

Seventh Annual Report of the State Mineralogist, for the year ending October 1, 1887. Sacramento, 1888. 315 pp. 10 illustrations.

Petroleum fields of California.
Petroleum refining.
Petroleum, asphaltum, and natural gas.
Coal in California, by W. A. Goodyear.
Natural gas in California.
Building stones of California.
Catalogue of California fossils, by J. G. Cooper. Part I.

Eighth Annual Report of the State Mineralogist, for the year ending October 1, 1888. Sacramento, 1888. 948 pp. 122 illustrations.

Mineral resources of State, by counties.
The Owens Valley earthquake, by W. A. Goodyear.
History of Mount Whitney, by W. A. Goodyear.
Yield of Bodie mines.
Tabular statement of California quartz mills.
Milling of gold ores in California, by John Hays Hammond.
Drift mining in California, by Russell L. Dunn.
Lithology of wall rocks, by Melville Attwood.
Waterwheels, by F. F. Thomas.
Notes on Western lead smelting, by W. S. Keyes.
The Russell process.
Notes on hydro-metallurgy of gold, by C. H. Aaron.
Notes on hydro-metallurgy of silver, by C. H. Aaron.
Natural and artificial cement.
Building stones, by A. W. Jackson.

Bulletin No. 1. A description of desiccated human remains in the State Mining Bureau, by Winslow Anderson. Sacramento, 1888. 41 pp. 6 plates.

Ninth Annual Report of the State Mineralogist, for the year ending December 1, 1889. Sacramento, 1890. 57 illustrations. 2 maps.

Map of Santa Cruz Island.
Map of Anacapa Island.
Geological Surveys in California, by H. I. Willey.
San Nicolas Island, by Stephen Bowers.
Refining and coining precious metals, by S. Gumbinner.
Auriferous gravels of California, by John Hays Hammond.
Statistics of mining ditches in the State.
Santa Cruz Island, by W. A. Goodyear.
Geology of the Channel Islands of California, by Lorenzo G. Yates.
Mollusca of the Channel Islands of California, by Lorenzo G. Yates.
Insular flora, by Lorenzo G. Yates.
Pottery in California, by Linna Irelan.
River mining, by R. L. Dunn.
Slate quarrying in California.
Value of fossils as indicating mineral products, by J. G. Cooper.
Clays, by W. D. Johnston.
California cements.
Glass manufacture in California, by H. DeGroot.

Tenth Annual Report of the State Mineralogist, for the year ending December 1, 1890. Sacramento, 1890. 983 pp. 179 illustrations. 10 maps.

Topographical and geological map of California.
Map of gold quartz mines near Grass Valley, Nevada City, and Banner Mountain, by J. B. Hobson.
Geological map of Nevada County, by J. B. Hobson.
Geological map of Placer County, by J. B. Hobson.
Map of Ophir and Duncan Hill districts, by J. B. Hobson.
Map of Forest Hill Divide, Placer County, by Ross E. Browne.
Map of mines near Sierra City, by L. P. Goldstone.
Geological map of Trinity County.
Geological map of Mother Lode region, by H. W. Fairbanks.
Geological map of Iowa Hill Divide, Placer County, by J. B. Hobson.
Review and description of mining districts and mines of California, by counties.
Geology of Mother Lode region, by H. W. Fairbanks.
Iron in Fresno County, by L. P. Goldstone.
Pico Cañon oil fields, by Edward North.
Water resources of Nevada County, by J. B. Hobson.
Ancient river beds of the Forest Hill Divide, by Ross E. Browne.
Searles borax marsh, by H. DeGroot.
Auriferous beach sands, by H. DeGroot.
Santa Maria River, by J. B. Hobson.
Gas wells at Summerland, by F. H. Wheelan.
Asphaltum mine of Ventura Asphalt Company, by E. W. Hilgard.
Lead smelting, by F. C. Von Petersdorff.
Mining of gold ores in California, by John Hays Hammond.
Location of mines, by R. P. Hammond, Jr.
Producer gas at Marsac Mills, Utah, by C. A. Stetefeldt.
Colorado Desert, by C. R. Orcutt.
Quicksilver mines and reduction works, by J. B. Randol.
Mineral lands on railroad grants.
Cyanide process, by Wm. D. Johnston.
Meteorites, by F. C. Von Petersdorff.

Catalogue of the State Museum of California, Vol. IV, being the collections made by the State Mining Bureau from March 31, 1887, to August 20, 1890. Sacramento, 1890. 261 pp.

Catalogue of the Library of the State Mining Bureau, San Francisco, September 1, 1892. Sacramento, 1892. 149 pp.

Eleventh Report (First Biennial) of the State Mineralogist, for the two years ending September 15, 1892. Sacramento, 1893. 612 pp. 73 illustrations. 4 maps.

Geological map of Shasta County, by H. W. Fairbanks.
Geological map of parts of San Diego, Orange and San Bernardino counties, by H. W. Fairbanks.
Topographical map of Golden Feather Channel, Butte County.
Map of the Georgetown Divide, El Dorado County.
Editor's report to Board of Examiners, by Charles G. Yale.
Review of mines of the State, by counties.
Geology and mineralogy of Shasta County, by H. W. Fairbanks.
Geology of Tehama, Colusa, Lake, and Napa counties, by H. W. Fairbanks.
Geology of parts of San Diego, Orange, and San Bernardino counties, by H. W. Fairbanks.
Golden Feather Channel Company, by E. B. Preston.
Salton Lake, by E. B. Preston.
Mineral springs in Siskiyou County, by W. L. Watts.
Hydraulic ejectors, by E. A. Wiltsee.
Origin, development, and establishment of American mining law, by A. H. Ricketts.

JAMES J. CRAWFORD,

State Mineralogist from February, 1893, to February, 1897.

Twelfth Report (Second Biennial) of the State Mineralogist, for the two years ending September 15, 1894. Sacramento, 1894. 541 pp. 101 illustrations. 5 maps.

Map of channel system of Harmony Ridge, Nevada County, by Ross E. Browne.
Map of principal gravel channels near Placerville, by R. Rowlands.
Map of Auriferous conglomerate deposits, Siskiyou County, by R. L. Dunn.
Map of Ancient channel systems of Calaveras County, by W. H. Storms.
Map of the Auriferous conglomerate deposit between San Andreas and Mokelumne Hill, Calaveras County, by W. H. Storms.
Antimony in California.
Argentiferous galena.
Asphalt.
Bituminous rock.
Borax.
Chrome iron.
Coal in California.
Coal, analyses of.
Copper.
Gold in California, by counties.
Geology of Madera and Mariposa counties, by W. H. Storms.

Twelfth Report (Second Biennial)—*Continued.*

Gypsum in California.
Iron.
Magnesite.
Manganese.
Mineral springs in California, with analyses.
Natural gas.
Petroleum.
Quicksilver.
Silver.
Structural materials.
Cement.
Clays, for brick and pottery.
Granite.
Macadam.
Marble, limestone, and lime.
Paving blocks.
Sandstone.
Steatite or soapstone.
Travertine and onyx.
Trachyte, tufa, and volcanic rock.
Asbestos.
Baryte.
Diatomaceous earth.
Emery.
Mineral paint.
Natural carbonic acid gas.
Pectolite.
Platinum.
Salt.
Soda.
Determining amount of gold in specimens.
Electric transmission plants in mining operations, by Thomas H. Leggett.
Red Rock, Goler and Summit districts, Kern County, by H. W. Fairbanks.
Auriferous conglomerate in California, by R. L. Dunn.
Mineral deposits of Inyo, Mono, and Alpine counties, by H. W. Fairbanks.
Geology of a portion of El Dorado County, by H. W. Fairbanks.
Ancient channel system of Calaveras County, by W. H. Storms.
Geology of northern Ventura, Santa Barbara, San Luis Obispo, Monterey and San Benito counties, by H. W. Fairbanks.
State Mining Bureau Act.
Mine bell signals.
Hydraulic Mining Definition Act.
Caminetti Act.
Debris Commissioner Act.

Bulletin No. 2. Methods of mine timbering, by W. H. Storms. San Francisco, June, 1894. Sacramento, 1894. 58 pp. 75 illustrations. (Second edition issued 1896.)

Bulletin No. 3. Gas and petroleum yielding formations of the Central Valley of California, by W. L. Watts. San Francisco, August, 1894. Sacramento, 1894. 100 pp. 13 illustrations. 4 maps.

Map of Great Central Valley of California, by W. L. Watts.
Sketch map of Sunset oil claims, by W. L. Watts.
Sketch map of asphaltum veins of Asphalto, by W. L. Watts.
Sketch map of oil claims near Coalinga, by W. L. Watts.

Bulletin No. 4. Catalogue of California fossils, by J. G. Cooper. Parts II, III, IV, and V. Sacramento, 1894. 73 pp. 67 illustrations. (Part I was published in the Seventh Annual Report of the State Mineralogist, 1887.)

Part II. Bibliography and references.
Part III. Additions to catalogue since 1888.
Part IV. Remarks on fossils from Orange County.
Part V. Description and figures of new species of California fossils.

Bulletin No. 5. The cyanide process, its practical application and economical results, by Dr. A. Scheidel. San Francisco, October, 1894. Sacramento, 1894. 140 pp. 46 illustrations.

Catalogue of West North American and many foreign shells, with their geographical ranges, by J. G. Cooper. San Francisco, April, 1894. Sacramento, 1894.

Bulletin No. 6. California gold mill practices, by E. B. Preston. San Francisco, September, 1895. Sacramento, 1895. 85 pp. 55 illustrations.

Bulletin No. 7. Mineral production of California, by counties, for the year 1894, by Charles G. Yale. Sacramento, 1895. Tabular sheet.

Bulletin No. 8. Mineral production of California, by counties, for the year 1895, by Charles G. Yale. Sacramento, 1896. Tabular sheet.

Gold production of California from 1848 to 1895, by Charles G. Yale. Sacramento, 1895. Tabular sheet.

Map of Mother Lode region, by H. W. Fairbanks. Prepared in 1890. Re-issued, with additions, January 1, 1896. Sacramento, 1896.

Bulletin No. 9. Mine drainage, pumps, etc., by Hans C. Behr. San Francisco, August, 1896. Sacramento, 1896. 210 pp. 206 illustrations.

Thirteenth Report (Third Biennial) of the State Mineralogist, for the two years ending September 15, 1896. Sacramento, 1896. 726 pp. 93 illustrations. 1 map.

Geological map of Mother Lode belt in El Dorado County, by H. Lahiff.
Antimony.
Argentiferous galena.
Asphalt and bituminous rock.
Borax.

Thirteenth Report (Third Biennial)—*Continued.*

Chromic iron.
Coal.
Copper.
Gold (by counties). In Gold chapter are following miscellaneous subjects:
- Tailings sampler.
- Toms for beach sands.
- Tailings, washing.
- Steam shovel.
- Diestelhorst dredge.
- Current wheels.
- Arastra, double.
- Conveyor reel.
- Rock conveyor for hydraulic mines.
- Steel-capped riffle bars.
- Water blast.
- Ore drier.

Gypsum.
Iron.
Magnesite.
Manganese.
Mineral springs, analyses.
Mining canals.
Natural gas.
Petroleum.
Quicksilver.
Structural materials.
- Asbestos.
- Chrysoprase.
- Diamonds.
- French chalk.
- Graphite.
- Infusorial earth.
- Mineral paint.
- Platinum.
- Salt.
- Soda.
- Sulphur.
- Zinc.

Preservation of structural timbers, by John D. Isaacs.
Methods of refining petroleum, by F. Salathé.
Oil as fuel in Los Angeles County, by W. L. Watts.
Ore deposits with reference to Mother Lode, by H. W. Fairbanks.
Electric power transmission plants in California, by W. F. C. Hasson.
Sampling and measurement of ore bodies in mine examinations, by E. B. Kirby.
Comstock ore sampling, by John D. McGillivray.
Water power and compressed air transmission plant at North Star Mine, by A. D. Foote.
Compressed air as motive power, by J. W. Buell.
Act for constructing and repairing restraining barriers in California rivers.

Bulletin No. 10. Bibliography relating to the geology, paleontology and mineral resources of California, by A. W. Vogdes. San Francisco, September, 1896. Sacramento, 1896. 121 pp.

Bulletin No. 11. Oil and gas yielding formations of Los Angeles, Ventura, and Santa Barbara counties, by W. L. Watts. San Francisco, December, 1896. Sacramento, 1897. 94 pp. 6 maps.

Geological map of Los Angeles County, by W. L. Watts.
Geological map of West Los Angeles, by W. L. Watts.
Geological map of Puente oil field, by W. L. Watts.
Geological map of Ventura County oil deposits, by W. L. Watts.
Map of cross-section of Santa Paula Cañon, by W. L. Watts.
Geological map of oil districts S. E. Santa Barbara County, by W. L. Watts.
Water blast.
Water blast and reflector.
List of fossils.

A. S. COOPER,

State Mineralogist from February, 1897, to February, 1901.

Bulletin No. 12. Mineral production of California, by counties, for 1896, by Charles G. Yale. Sacramento, 1897. Tabular sheet.

Gold production of California, 1848 to 1896, by Charles G. Yale. Sacramento, 1896. Tabular sheet.

Bulletin No. 13. Mineral production of California, by counties, for 1897, by Charles G. Yale. Sacramento, 1898. Tabular sheet.

Gold production of California, 1848 to 1897, by Charles G. Yale. Sacramento, 1897. Tabular sheet.

Bulletin No. 14. Mineral production of California, by counties, for 1898, by Charles G. Yale. Sacramento, 1899. Tabular sheet.

Gold production of California, 1848 to 1898, by Charles G. Yale. Sacramento, 1898. Tabular sheet.

Bulletin No. 15. Map of Oil City fields, Fresno County, by John. H. Means. Sacramento, 1899.

Bulletin No. 16. The genesis of petroleum and asphalt in California, by A. S. Cooper. San Francisco, December, 1899. Sacramento, 1899. 39 pp. 29 illustrations.

Also contains a chapter on "Prospecting for petroleum."

Bulletin No. 17. Mineral production of California, by counties, for 1899, by Charles G. Yale. Sacramento, 1900. Tabular sheet.

Gold production of California, from 1848 to 1899, by Charles G. Yale. Sacramento, 1899. Tabular sheet.

Bulletin No. 18. Mother Lode region of California, by W. H. Storms. San Francisco, October, 1900. Sacramento, 1900. 154 pp. 49 illustrations.

Geology of the gold belt.
Divisions of the gold belt.
Classification of rocks.
Methods of mining.
Cost of mining.
Mining machinery.
Code of mine bell signals.
Canvas tables.
Slime plants.
Mill screen frames.
Regulating height of discharge in mills.
Methods of timbering.
Chlorination works.

Bulletin No. 19. Oil and gas yielding formations of California, by W. L. Watts. San Francisco, November, 1900. Sacramento, 1900. 236 pages. 60 illustrations. 8 maps.

Geological map of the Puente Hills, by W. L. Watts.
Geological map of foothills Santa Ana Mountains, by W. L. Watts.
Geological map of Los Angeles oil fields (2), by W. L. Watts.
Geological map of Peninsula of San Pedro, by W. L. Watts.
Geological map of southeastern portion of Orange County, by W. L. Watts.
Geological map of territory between Sespe and Piru creeks, by W. L. Watts.
Geology of the oil districts.
Production and prospective wells in the counties.
San Joaquin Valley.
Description and condition of the counties.
Pipe-lines and refineries.
Geographical and geological range of oil-yielding formations.
Character and fuel values of California oils.
Review of petroleum industry of California.

Catalogue of the State Museum of California, Vol. V, being the collections made by the State Mining Bureau from September, 1890, to May 30, 1897. Sacramento, 1899.

Report of Board of Trustees for four years ending September 1, 1900. 15 pages. Sacramento, 1901.

Bulletin No. 20. Synopsis of general report State Mining Bureau, by W. L. Watts, Sacramento, 1901. 21 pp. (Not issued for general distribution.)

LEWIS E. AUBURY,

State Mineralogist, February, 1901 (incumbent, June, 1907).

Bulletin No. 21. Mineral production of California, by counties, for 1900, by Charles G. Yale. Sacramento, 1901. Tabular sheet.

Bulletin No. 22. Mineral production of California, for fourteen years, 1887 to 1900, by Charles G. Yale. Sacramento, 1901. Tabular sheet.

Gold production of California, from 1848 to 1900, by Charles G. Yale. Sacramento, 1900. Tabular sheet.

Reconnaissance of the Colorado Desert mining districts, by Stephen Bowers. Sacramento, 1901. 19 pp. 2 illustrations.

Bulletin No. 23. The copper resources of California, by Lewis E. Aubury. San Francisco, April, 1902. Sacramento, 1905. 282 pp. 69 illustrations. 9 maps.

Relief map of California.
Map of part of Shasta County copper belt.
Map of Sulphide Copper District, Shasta County.
Geological map of western part of Shasta County copper belt.
Geological map of eastern and central parts of Shasta County copper belt.
Map of Island Mountain Cons. Copper Mines.
Sketch map of Mineral Hill group of mines.
Map of Green Mountain group of mines.
Map of known copper deposits of California.
The copper ores.
Historical notes.
Geology of copper belt of Shasta County.
McDougal roasting furnace.
Coast Range copper deposits.
Review by counties, with descriptions of mines.
The Sierra Nevada copper belt.
Southern and eastern copper deposits.

Bulletin No. 24. Saline deposits of California, by G. E. Bailey. San Francisco, May, 1902. Sacramento, 1902. 216 pp. 99 illustrations. 5 maps.

Map of saline deposits of southern portion of California.
Relief map of California.
Map of Lakes Le Conte and Aubury.
Map of Mohawk Desert dry lakes.
Map of California, showing location of saline deposits.
The Great Basin.
Geological history.
Borates.
Historical notes on borates.
Borax production of California.
Borates by counties.
Springs containing borates.
Desert springs, list and location of.
Manufacture of borax.
Borax minerals.
Carbonates.
Natural soda.

Bulletin No. 24—*Continued.*

Owens lake.
Mineralogy of carbonates.
Salt.
Mineralogy of mineral chlorides.
Salton sea.
Nitrates.
Niter in Chile.
Historical notes on niter.
Chemical notes on niter.
California niter deposits.
Mineralogy of nitrates.
Niter analyses.
Notes on fertilizers.
Elevations.
Bibliography.

Bulletin No. 25. Mineral production of California, by counties, for 1901, by Charles G. Yale. Sacramento, 1902. Tabular sheet.

Bulletin No. 26. Mineral production of California for the past fifteen years, by Charles G. Yale. Sacramento, 1902. Tabular sheet.

Gold production of California, 1848 to 1901, by Charles G. Yale. Sacramento, 1901. Tabular sheet.

Minerals of California, by G. E. Bailey. Sacramento, 1902. 56 pp. 5 illustrations. 20 maps of counties.

Gold production of California, 1848 to 1902, by Charles G. Yale. Sacramento, 1902. Tabular sheet.

Report of Board of Trustees for the year ending June 30, 1901, and year ending June 30, 1902. Sacramento, 1902. 17 pp.

Bulletin No. 27. The quicksilver resources of California, by William Forstner. San Francisco, June, 1903. Sacramento, 1903. 273 pp. 144 illustrations. 8 maps.

Geological map of parts of Napa, Sonoma, and Lake counties quicksilver districts.
Map of Sulphur Creek district.
Condition of the quicksilver industry.
Geology of quicksilver belt of California.
Ore deposits.
Genesis of quicksilver ore deposits.
Districts and mines north of San Francisco.
Districts and mines south of San Francisco.
New Almaden Mine, total output.
Quicksilver in Trinity and other counties.
Metallurgy of quicksilver.
Concentrating system.
Furnaces.
Condensers.
Soot-cleaning machines.
Elevations of mines by counties.

Bulletin No. 28. Mineral production of California, for 1902, by Charles G. Yale. Sacramento, 1903. Tabular sheet.

Bulletin No. 29. Mineral production of California for past sixteen years, by Charles G. Yale. Sacramento, 1903. Tabular sheet.

Bulletin No. 30. Bibliography relating to the geology, paleontology, and mineral resources of California, by A. W. Vogdes. 2d ed. San Francisco, June 30, 1903. Sacramento, 1904. 290 pp.

Publications of State of California.
State Geological Surveys.
Surveyor-General's reports.
State Mining Bureau publications.
California, Senate and Assembly documents.
University of California publications.
Publications of United States Government.
Publications of Senate and House of Representatives.
Reports of Secretary of War.
Navy publications.
Railroad explorations and surveys.
Mineral resources of Western States.
U. S. Mint reports on mineral resources.
Coast Survey reports.
Census reports.
Geological and Geographical Surveys.
U. S. Geological Survey reports.
Smithsonian Institution reports.
National Museum proceedings.
Publications of scientific societies.
Geological Surveys other than California.
Miscellaneous publications. Lists of authors.
Cartography of California.
Maps published by State Mining Bureau.
Authors of works on California mining.

Bulletin No. 31. Chemical analyses of California petroleum, by H. N. Cooper. Sacramento, 1904. Tabular sheet.

Bulletin No. 32. Production and use of petroleum in California, by Paul W. Prutzman. San Francisco, March, 1904. Sacramento, 1904. 230 pp. 116 illustrations. 14 maps.

Map of oil districts of California, by Paul W. Prutzman.
Map of Fullerton oil fields, by Paul W. Prutzman.
Map of Puente oil field, by Paul W. Prutzman.
Map of Whittier oil field, by Paul W. Prutzman.
Map of city oil field of Los Angeles, by C. A. Blackmar.
Map of eastern portion of Newhall oil field, by Paul W. Prutzman.
Map of Summerland oil field, by Paul W. Prutzman.
Map of Kern River oil field, by Paul W. Prutzman.
Map of Sunset oil field, by Paul W. Prutzman.
Map of Midway oil fields, by Paul W. Prutzman.
Map of McKittrick oil fields, by Paul W. Prutzman.

Bulletin No. 32—*Continued.*

Map of Coalinga oil fields, by Paul W. Prutzman.
Map of Santa Maria oil fields, by Paul W. Prutzman.
Map of Ventura oil fields, by Paul W. Prutzman.
History and production of oil in California.
Topography and geology.
Drilling.
Cost of well.
Field operations.
Uses of crude oil.
Physical characteristics of California crude oil.
Calorific value.
Use of oil for fuel.
Economy of use.
Combustion.
Evaporative tests.
Injectors and burners.
Fireboxes.
Storage and history.
Regulation of oil fires.
Liquid fuel on locomotives.
Converting coal burners to oil burners.
Locomotive fuel tests.
Liquid fuel on steamships.
Oil-using vessels.
Government boiler tests.
Minor uses of fuel oil.
Petroleum in gas-making.
Oiled roads.
Oil-refining industry.
Refinery oils, analyses.
Methods of refining.
Asphalt from oil.
Chemistry of California petroleum.

Bulletin No. 33. Mineral production of California, by counties, for 1903, by Charles G. Yale. Sacramento, 1904. Tabular sheet.

Bulletin No. 34. Mineral production of California for seventeen years, by Charles G. Yale. Sacramento, 1904. Tabular sheet.

Bulletin No. 35. Mines and minerals of California, by Charles G. Yale. Sacramento, 1904. 55 pp. 20 county maps. Relief map of California.

Gold production of California, 1848 to 1904, by Charles G. Yale. Sacramento, 1904. Tabular sheet.

Report of Board of Trustees of State Mining Bureau for fiscal year ending June, 1903, and for fiscal year ending June, 1904. Sacramento, 1904. 13 pp.

Relief and mineral map of California, 1904.

Bulletin No. 36. Gold dredging in California, by J. E. Doolittle. San Francisco, May, 1905. Sacramento, 1905. 120 pp. 66 illustrations. 3 maps.

Relief map of California.
Map of dredging lands near Feather River.
Map of dredging lands in Folsom district.
History of dredging operations.
Area of dredge gravels.
Geology.
Agriculture.
Types of dredges.
Horse power required.
Screens and sluices.
Dredge crews.
Working costs.
Dredge records.
Prospecting and examination of conditions.
Dredge mining districts of California.
Dredge data.

Bulletin No. 37. Gems, jewelers' materials, and ornamental stones of California, by George F. Kunz. San Francisco, June, 1905. Sacramento, 1905. 168 pp. 54 illustrations.

Distribution of gem minerals in California.
Historical outline.
Properties of gems.
Localities where found in California.
Gem mines in California.

Bulletin No. 38. Structural and industrial materials of California, under direction of Lewis E. Aubury, State Mineralogist. San Francisco, January, 1906. Sacramento, 1906. 412 pp. 150 illustrations. 1 map.

Map showing area of granite outcropping in California.
Economic features of California building stones.
Classification of building stones.
References on California building stones.
Kinds of building stones in California.
Selection of building stones.
Durability of building stones.
Methods of ascertaining durability of building stones.
Artificial preservatives.
Granite.
Granite quarries and districts in California.
Limestone and lime.
Distribution of limestone in California.
Uses of limestone and lime.
Limekilns.
Marble.
References on California marble.
Marble distribution in California.
Sandstone.
Sandstone quarries in California.

Bulletin No. 38—*Continued.*

Serpentine.
Slate.
References on California slate.
Slate in California.
Volcanic and intrusive rocks.
Artificial stone.
Cement products.
Portland cement industry: Uses; tests; analyses; references on; plants in California.
Clays and clay industries of California.
Clay, origin of; chemical composition; physical properties; high-grade clays; low-grade clays.
Adobe.
Building brick manufacture.
Brick-making machines.
Brick, classification of.
Antimony.
Asbestos.
Barytes.
Bauxite.
Calcareous tufa.
Chromite.
Concrete rock.
Fuller's earth.
Glass-making materials.
Graphite.
Gypsum.
Infusorial or diatomaceous earth.
Iron ore.
Jasper.
Lithia.
Macadam.
Magnesite.
Manganese.
Mica.
Mineral paint.
Onyx.
Paving blocks.
Platinum.
Pyrites.
Rubble.
Quartz crystals.
Soapstone.
Talc.
Sulphur.
Tungsten.
Zinc.
Specimens of structural substances in Bureau museum.

Bulletin No. 39. Mineral production of California, by counties, for 1904, by Charles G. Yale. Sacramento, 1905. Tabular sheet.

Bulletin No. 40. Mineral production of California for eighteen years, by Charles G. Yale. Sacramento, 1905. Tabular sheet.

Bulletin No. 41. Mines and minerals of California, for 1904, by Charles G. Yale. Sacramento, 1905. 54 pp. 20 county maps.

Gold production of California, 1848 to 1904, by Charles G. Yale. Sacramento, 1905. Tabular sheet.

Bulletin No. 42. Mineral production of California, by counties, 1905, by Charles G. Yale. Sacramento, 1906. Tabular sheet.

Bulletin No. 43. Mineral production of California for nineteen years, by Charles G. Yale. Sacramento, 1906. Tabular sheet.

Bulletin No. 44. California mines and minerals for 1905, by Charles G. Yale. Sacramento, 1907. 31 pp. 20 county maps.

Report of Board of Trustees and State Mineralogist, covering the fifty-sixth fiscal year ending June 30, 1905, and fifty-seventh fiscal year ending June 30, 1906. Sacramento, 1906. 20 pp.

Map of forest reserves in California. Sacramento, 1907.

Bulletin No. 45. Auriferous black sands of California, by J. A. Edman. Sacramento, 1907. 10 pp.

Bulletin No. 46. General index of publications of the California State Mining Bureau, by Charles G. Yale. Sacramento, 1907.

MAPS AND REGISTERS.

ISSUED DURING ADMINISTRATION OF A. S. COOPER.

Register of mines and minerals, with map, of Plumas County, by J. A. Edman. Data collected 1898. Sacramento, 1900. 36 pp.

Register of mines and minerals, with map, of Calaveras County, by W. H. H. Penniman. Data collected April, 1899. Sacramento, 1900. 50 pp.

Register of mines and minerals, with map, of Siskiyou County, by J. M. Davidson. Data collected February, 1898. Sacramento, 1900. 50 pp.

Register of mines and minerals, with map, of Siskiyou County, by

Bulletin # 47 -- Statistical sheet. 1906.
" 48 -- " " for 20 years.
" 49 -- " & Maps - pamph.
" 50 -- Copper Resources of California 1908
" 51 -- Statistical sheet-1907
" 52 -- " " for 21 years
" 53 -- " & Maps - pamph
" 54 -- " sheet-1908
" 55 -- " " for 22 years
" 56 -- " & Maps - pamph
" 57 -- Gold Dredging in California 1910
" 58 -- Statistical sheet-1909
" 59 -- " " for 23 years
" 60 -- Statistical, Mining Laws, Maps 1909
" 61 -- Statistical sheet-1910
" 62 -- " " for 24 years
" 63 -- Petroleum Development in Southern Calif. (In preparation)

John B. Tregloan. Data collected August, 1908. [illegible] geological map of west half of county. 17 pp.

Bu ... and minerals of California, for 1904, by

G

B

I

l

l

l

register of mines and ...

J. M. Davidson. Data collected February, 1898. Sacramento, 1900. 50 pp.

Register of mines and minerals, with map, of Siskiyou County, by W. S. Lowden. Data collected October, 1898. Sacramento, 1900. 46 pp.

Register of mines and minerals, with map, of Nevada County, by Charles E. Uren. 18 pp.

ISSUED DURING ADMINISTRATION OF LEWIS E. AUBURY.

Register of mines and minerals, with map, of Lake County, by George Madeira. Data collected November, 1901. 14 pp.

Register of mines and minerals, with map, of Placer County, by Ivan H. Parker. Data collected February, 1902. 21 pp.

Register of mines and minerals, with map, of El Dorado County, by J. F. Armstrong. Data collected April, 1902. Includes also an economic geological map of the county. 32 pp.

Register of mines and minerals, with map, of Shasta County, by M. E. Dittmar. Data collected March, 1902. 27 pp.

Register of mines and minerals, with map, of Inyo County, by A. V. Davidson. Data collected March, 1902. 24 pp.

Register of mines and minerals, with map, of San Bernardino County, by G. E. Bailey. Data collected July, 1902. Also contains map of the mountains of San Bernardino County, and list of elevations. 35 pp.

Register of mines and minerals, with map, of San Diego County, by I. A. Hubon. Data collected October, 1902. List of elevations. 15 pp.

Register of oil wells in Los Angeles County, with map, by Charles A. Blackmar. Data collected April, 1903. 13 pp.

Register of mines and minerals, with map, of Sierra County, by George F. Taylor. Data collected June, 1903. Also economic geological map of western half of county. 24 pp.

Register of mines and minerals, with map, of Tuolumne County, by R. P. McLaughlin. Data collected July, 1903. Also economic geological map of southwestern portion of county, and table of elevations. 24 pp.

Register of mines and minerals, with map, of Amador County, by John B. Tregloan. Data collected August, 1903. Also economic geological map of west half of county. 17 pp.

Register of mines and minerals, with map, of Mariposa County, by E. M. Wilkinson. Data collected December, 1903. Also economic geological map of northwestern portion of county, and list of elevations. 19 pp.

Register of mines and minerals, with map, of Butte County, by W. E. Thorne. Data collected December, 1903. Also map of dredging lands adjacent to Feather River, and list of elevations. 13 pp.

Register of mines and minerals, with map, of Kern County, by Marion Aubury. Data collected January, 1904. Also map of Kern River oil field, by P. W. Prutzman; map of McKittrick oil field, by P. W. Prutzman; map of Midway oil field, by P. W. Prutzman; map of Summit oil field, by P. W. Prutzman. 37 pp.

Register of mines and minerals, with map, of Yuba County, by Lew B. Harris. Data collected October, 1905. Also economic geological map of county and map of dredging lands near Oroville. 20 pp.

Register of mines and minerals, with map, of Santa Barbara County, by Lew B. Harris. Data collected March, 1906. Also map of Summerland oil field; map of Santa Maria oil field; map of Los Alamos oil field. 12 pp.

APPENDIX.

FERRY BUILDING, SAN FRANCISCO, ONE HALF THE UPPER FLOOR OF WHICH IS OCCUPIED BY THE STATE MINING BUREAU.
(This building is constructed of Colusa Sandstone and the reconstructed tower is of reinforced concrete.)

CALIFORNIA STATE MINING BUREAU.

This institution aims to be the chief source of reliable information about the mineral resources and mining industries of California.

It is encouraged in its work by the fact that its publications have been in such demand that large editions are soon exhausted. In fact, copies of them now command high prices in the market.

The publications, as soon as issued, find their way to the scientific, public, and private libraries of all countries.

STATE MINERALOGIST.

The California State Mining Bureau is under the supervision of Hon. Lewis E. Aubury, State Mineralogist.

It is supported by legislative appropriations, and in some degree performs work similar to that of the geological surveys of other states; but its purposes and functions are mainly practical, the scientific work being clearly subordinate to the economic phases of the mineral field, as shown by the organic law governing the Bureau, which is as follows:

SEC. 4. It shall be the duty of said State Mineralogist to make, facilitate, and encourage special studies of the mineral resources and mineral industries of the State. It shall be his duty: To collect statistics concerning the occurrence of the economically important minerals and the methods pursued in making their valuable constituents available for commercial use; to make a collection of typical geological and mineralogical specimens, especially those of economic or commercial importance, such collection constituting the Museum of the State Mining Bureau; to provide a library of books, reports, drawings, bearing upon the mineral industries, the sciences of mineralogy and geology and the arts of mining and metallurgy, such library constituting the Library of the State Mining Bureau; to make a collection of models, drawings, and descriptions of the mechanical appliances used in mining and metallurgical processes; to preserve and so maintain such collections and library as to make them available for reference and examination, and open to public inspection at reasonable hours; to maintain, in effect, a bureau of information concerning the mineral industries of this State, to consist of such collections and library, and to arrange, classify, catalogue, and index the data therein contained, in a manner to make the information available to those desiring it, and to provide a custodian specially qualified to promote this purpose; to make a biennial report to the Board of Trustees of the Mining Bureau, setting forth the important results of his work, and to issue from time to time such bulletins as he may deem advisable concerning the statistics and technology of the mineral industries of this State.

THE BULLETINS.

The field covered by the books issued under this title is shown in the list of publications. Each bulletin deals with only one phase of mining. Many of them are elaborately illustrated with engravings and maps. Only a nominal price is asked, in order that those who need them most may obtain a copy.

THE REGISTERS OF MINES.

The Registers of Mines form practically both a State and County directory of the mines of California, each county being represented in a separate pamphlet. Those who wish to learn the essential facts about any particular mine are referred to them. The facts and figures are given in tabular form, and are accompanied by a topographical map of the county on a large scale, showing location of each mineral deposit, towns, railroads, roads, power lines, ditches, etc.

HOME OF THE BUREAU.

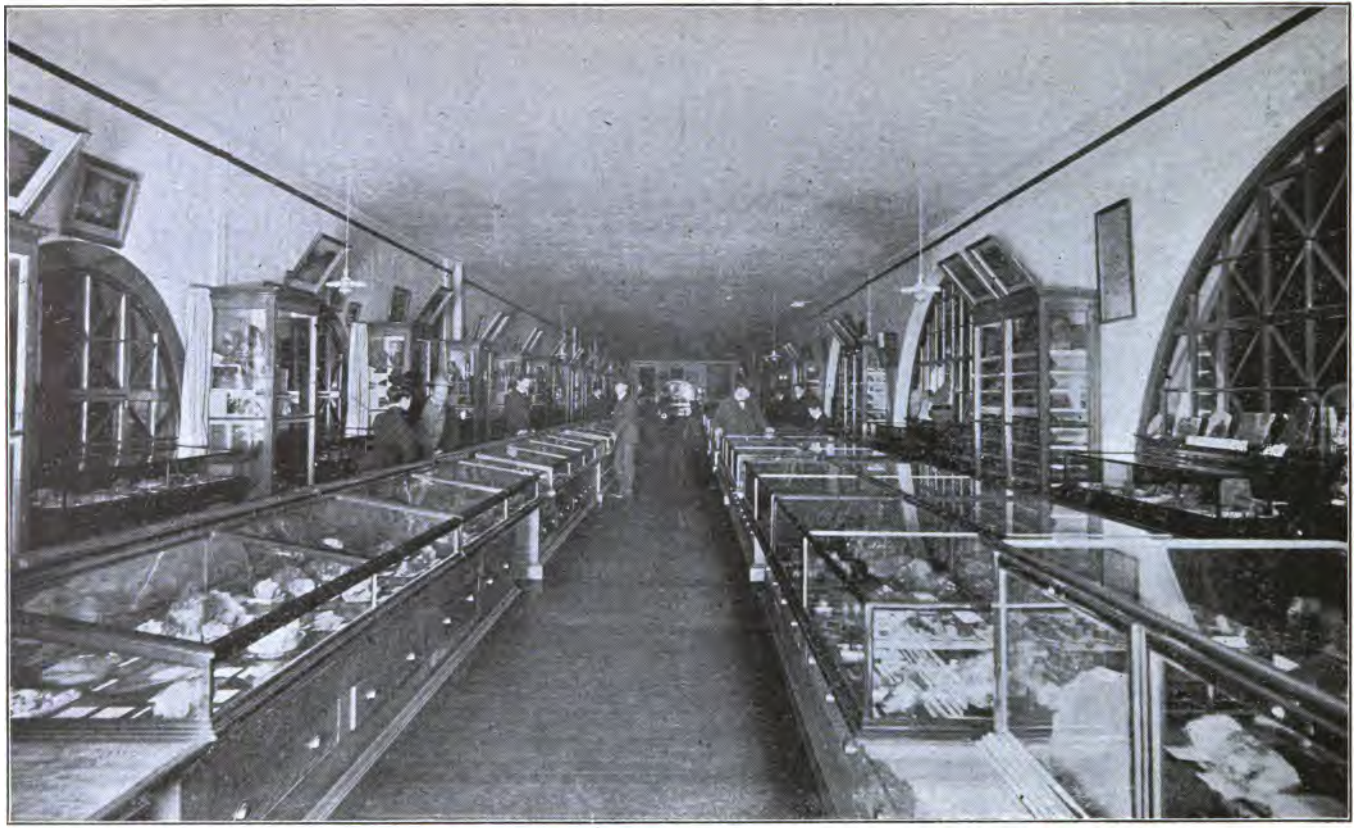
The Mining Bureau occupies the north half of the third floor of the Ferry Building, in San Francisco. All visitors and residents are invited to inspect the Museum, Library, and other rooms of the Bureau and gain a personal knowledge of its operations.

THE MUSEUM.

The Museum now contains over 16,000 specimens, carefully labeled and attractively arranged in showcases in a great, well-lighted hall, where they can be easily studied. The collection of ores from California mines is of course very extensive, and is supplemented by many cases of characteristic ores from the principal mining districts of the world. The educational value of the exhibit is constantly increased by substituting the best specimens obtainable for those of less value.

These mineral collections are not only interesting, beautiful, and in every way attractive to the sightseers of all classes, but are also educational. They show to manufacturers, miners, capitalists, and others the character and quality of the economic minerals of the State, and where they are found. Plans have been formulated to extend the usefulness of the exhibit by special collections, such as one showing the chemical composition of minerals; another showing the mineralogical composition of the sedimentary, metamorphic, and igneous rocks of the State; the petroleum-bearing formations, ore bodies, and their country rocks, etc.

Besides the mineral specimens, there are many models, maps, photographs, and diagrams illustrating the modern practice of mining, milling, and concentrating, and the technology of the mineral industries. An educational series of specimens for high schools has been inaugurated, and new plans are being formulated that will make the Museum even more useful in the future than in the past. Its popularity is shown by the fact that over 100,000 visitors registered last year, while many failed to leave any record of their visit.



MINERAL MUSEUM, CALIFORNIA STATE MINING BUREAU.

THE LIBRARY.

This is the mining reference library of the State, constantly consulted by mining men, and contains between 4,000 and 5,000 volumes of selected works, in addition to the numerous publications of the Bureau itself. On its shelves will be found reports on geology, mineralogy, mining, etc., published by states, governments, and individuals; the reports of scientific societies at home and abroad; encyclopædias, scientific papers, and magazines; mining publications; and the current literature of mining ever needed in a reference library.

Manufacturers' catalogues of mining and milling machinery by California firms are kept on file. The Registers of Mines form an up-to-date directory for investor and manufacturer.

The librarian's desk is the general bureau of information, where visitors from all parts of the world are ever seeking information about all parts of California.

READING-ROOM.

This is a part of the Library Department and is supplied with over one hundred current publications. Visitors will find here various California papers and leading mining journals from all over the world.

The Library and Reading-Room are open to the public from 9 A. M. to 5 P. M. daily, except Sundays and holidays, and from 9 A. M. to 12 M. on Saturdays.

THE LABORATORY.

This department identifies for the prospector the minerals he finds, and tells him the nature of the wall rocks or dikes he may encounter in his workings; but this department *does not* do assaying nor compete with private assayers. The presence of minerals is determined, but not the percentage present. No charges for this service are made to any resident of the State. Many of the inquiries made of this department have brought capital to the development of new districts. Many technical questions have been asked and answered as to the best chemical and mechanical processes of handling ores and raw material. The laboratory is well equipped.

THE DRAUGHTING-ROOM.

In this room are prepared scores of maps, from the small ones filling only a part of a page, to the largest County and State maps; and the numerous illustrations, other than photographs, that are constantly being required for the Bulletins and Registers of Mines. In this room, also, will be found a very complete collection of maps of all kinds

LIBRARY AND FREE READING-ROOM, CALIFORNIA STATE MINING BUREAU.

relating to the industries of the State, and one of the important duties of the department is to make such additions and corrections as will keep the maps up to date. The seeker after information inquires here if he wishes to know about the geology or topography of any district; about the locations of the new camps, or positions of old or abandoned ones; about railroads, stage roads, and trails; or about the working drawings of anything connected with mining.

MINERAL STATISTICS.

One of the features of this institution is its mineral statistics. Their annual compilation by the State Mining Bureau began in 1893. No other State in the Union attempts so elaborate a record, expends so much labor and money on its compliation, or secures so accurate a one.

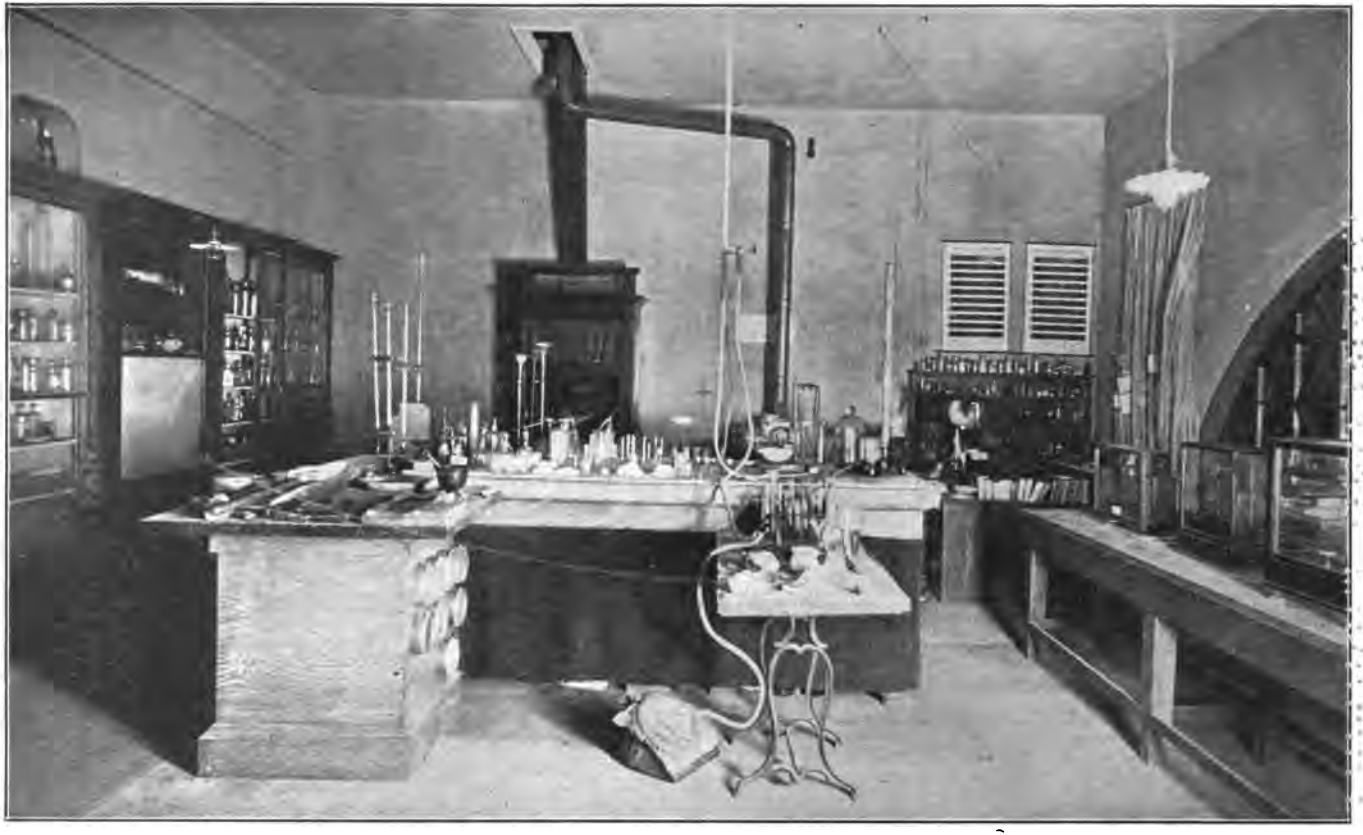
The State Mining Bureau keeps a careful, up-to-date, and reliable but confidential register of every producing mine, mine-owner, and mineral industry in the State. From them are secured, under pledge of secrecy, reports of output, etc., and all other available sources of information are used in checking, verifying, and supplementing the information so gained. This information is published in an annual tabulated, statistical, single-sheet bulletin, showing the mineral production by both substances and counties.

TOTAL GOLD PRODUCT OF CALIFORNIA—1848-1905.

1848	$245,301	1863	$23,501,736	1878	$18,839,141	1893	$12,422,811
1849	10,151,360	1864	24,071,423	1879	19,626,654	1894	13,923,281
1850	41,273,106	1865	17,930,858	1880	20,030,761	1895	15,334,317
1851	75,938,232	1866	17,123,867	1881	19,223,155	1896	17,181,562
1852	81,294,700	1867	18,265,452	1882	17,146,416	1897	15,871,401
1853	67,613,487	1868	17,555,867	1883	24,316,873	1898	15,906,478
1854	69,433,931	1869	18,229,044	1884	13,600,000	1899	15,336,031
1855	55,485,395	1870	17,458,133	1885	12,661,044	1900	15,863,355
1856	57,509,411	1871	17,477,885	1886	14,716,506	1901	16,989,044
1857	43,628,172	1872	15,482,194	1887	13,588,614	1902	16,910,320
1858	46,591,140	1873	15,019,210	1888	12,750,000	1903	16,471.264
1859	45,846,599	1874	17,264,836	1889	11,212,913	1904	19,109,600
1860	44,095,163	1875	16,876,009	1890	12,309,793	1905	19,197,043
1861	41,884,995	1876	15,610,723	1891	12,728,869		
1862	38,854,668	1877	16,501,268	1892	12,571,900	Total	$1,434,053,311

COUNTY RANK IN GOLD PRODUCT IN 1905.

While gold is still the leading mining product, its yield no longer puts the greatest gold-producing county in the first place. The petroleum of Kern County and the copper of Shasta give them precedence. Gold is more widely distributed than any other substance thus far mined in California; 34 counties out of the 57 in the State showing a gold yield in 1905, and it is known to exist in several others. The order



LABORATORY, CALIFORNIA STATE MINING BUREAU.

in rank of the counties of the State in the production of gold alone, is at present as follows:

1. Nevada	$3,179,715	14. Mariposa	$386,350	27. Del Norte	$10,590
2. Butte	2,607,500	15. El Dorado	384,735	28. Monterey	4,000
3. Amador	2,445,815	16. Yuba	324,135	29. Tulare	2,300
4. Calaveras	1,736,816	17. Mono	308,884	30. Ventura	1,200
5. Tuolumne	1,291,726	18. Plumas	283,810	31. Santa Barbara	725
6. Kern	1,160,971	19. Inyo	135,959	32. Alpine	575
7. Siskiyou	803,035	20. San Diego	109,712	33. San Luis Obispo	300
8. Trinity	690,844	21. Madera	50,867	34. Mendocino	40
9. Shasta	684,952	22. Stanislaus	50,000	Undistributed	147,500
10. Sacramento	668,382	23. Humboldt	45,824		
11. Placer	597,793	24. Fresno	40,037	Total	$19,197,043
12. Sierra	517,303	25. Riverside	35,690		
13. S. Bernardino	473,893	26. Los Angeles	15,035		

TOTAL MINERAL PRODUCT OF CALIFORNIA FOR 1905.

The following table shows the yield and value of mineral substances of California for 1905, as per returns received at the State Mining Bureau, San Francisco, in answer to inquiries sent to producers:

	Quantity.	Value.
Asbestos	112 tons	$2,625
Asphalt	40,304 "	285,290
Bituminous Rock	24,753 "	60,436
Borax	46,334 "	1,019,158
Cement	1,265,553 bbls.	1,791,916
Chrome	40 tons	600
Clays (Brick)	286,618 M	2,273,786
Clays (Pottery)	133,805 tons	130,146
Coal	46,500 "	144,500
Copper	16,997,489 lbs.	2,650,605
Fuller's Earth	1,344 tons	38,000
Gems	--------	148,500
Glass Sand	9,257 "	8,121
Gold	--------	19,197,043
Granite	228,788 cu. ft.	353,837
Gypsum	12,850 tons	54,500
Infusorial Earth	3,000 "	15,000
Lead	533,680 lbs.	25,083
Lime	616,995 bbls.	555,322
Limestone	192,749 tons	323,325
Lithia Mica	25 "	276
Macadam	1,440,455 "	942,503
Magnesite (Crude)	3,933 "	16,221
Marble	73,303 cu. ft.	129,450
Mineral Paint	754 tons	4,025
Mineral Water	2,194,150 gals.	538,700
Natural Gas	148,345 M cu. ft.	102,479
Paving Blocks	3,408 M	134,347
Petroleum	34,275,701 bbls.	9,007,820
Platinum	200 oz.	3,320
Pyrites	15,503 tons	63,958
Quicksilver	24,655 flasks	886,081
Rubble	1,183,802 tons	774,267
Salt	77,118 "	141,925
Sandstone	302,813 cu. ft.	483,268
Silver	--------	678,494
Slate	4,000 squares	40,000
Soapstone	300 tons	3,000
Soda	15,000 "	22,500
Tungsten	52 "	18,800
Total value		$43,069,227

MINING BUREAU PUBLICATIONS.

Publications of this Bureau will be sent on receipt of the requisite amount and postage. Only stamps, coin or money orders will be accepted in payment. (*All publications not mentioned are exhausted.*)

Attention is respectfully called to that portion of Section 8, amendment to the Mining Bureau Act, approved March 10, 1903, which states:

"The Board (Board of Trustees) is hereby empowered to fix a price upon, and to dispose of to the public, at such price, any and all publications of the Bureau, including reports, bulletins, maps, registers, etc. The sum derived from such disposition must be accounted for and used as a revolving printing and publishing fund for other reports, bulletins, maps, registers, etc. The prices fixed must approximate the actual cost of printing and issuing the respective reports, bulletins, maps, registers, etc., without reference to the cost of obtaining and preparing the information embraced therein."

	Price.	Postage.
Report XI—1892, First Biennial	$1 00	$0 15
Report XIII—1896, Third Biennial	1 00	20
Bulletin No. 6—"Gold Mill Practices in California" (3d edition)	50	04
Bulletin No. 9—"Mine Drainage, Pumps, Etc.," bound	60	08
Bulletin No. 15—"Map of Oil City Oil Fields, Fresno County, California"	05	02
Bulletin No. 16—"Genesis of Petroleum and Asphaltum in California" (3d edition)	30	03
Bulletin No. 23—"Copper Resources of California"	50	12
Bulletin No. 24—"Saline Deposits of California"	50	10
Bulletin No. 27—"Quicksilver Resources of California"	75	08
Bulletin No. 30—"Bibliography Relating to the Geology, Palæontology and Mineral Resources of California," including List of Maps.	50	10
Bulletin No. 31—"Chemical Analysis of California Petroleum"	..	02
Bulletin No. 32—"Production and Use of California Petroleum"	75	08
Bulletin No. 36—"Gold Dredging in California" (2d edition)	50	08
Bulletin No. 37—"Gems and Jewelers' Materials of California" (2d edition)	50	08
Bulletin No. 38—"Structural and Industrial Materials of California"	75	20
Bulletin No. 39—"Mineral Production of California"—1904	..	02
Bulletin No. 41—"Mines and Minerals of California"—1904	..	04
Bulletin No. 42—"Mineral Production of California"—1905	..	02
Bulletin No. 43—"Mineral Production of California for Nineteen Years"	..	02
Bulletin No. 44—"Mines and Minerals of California"—1905	..	04
Bulletin No. 45—"The Auriferous Black Sands of California"	10	02
Gold Production in California from 1848 to 1906	..	02
Register of Mines, with Map, Amador County	25	08
Register of Mines, with Map, Butte County	25	08
Register of Mines, with Map, El Dorado County	25	08
Register of Mines, with Map, Inyo County	25	08
Register of Mines, with Map, Kern County	25	08
Register of Mines, with Map, Lake County	25	08
Register of Mines, with Map, Mariposa County	25	08
Register of Mines, with Map, Nevada County	25	08
Register of Mines, with Map, Placer County	25	08
Register of Mines, with Map, San Bernardino County	25	08
Register of Mines, with Map, San Diego County	25	08
Register of Mines, with Map, Santa Barbara County	25	08
Register of Mines, with Map, Shasta County	25	08

MINING BUREAU PUBLICATIONS—*Continued.*

	Price.	Postage.
Register of Mines, with Map, Sierra County	$0 25	$0 08
Register of Mines, with Map, Siskiyou County	25	08
Register of Mines, with Map, Trinity County	25	08
Register of Mines, with Map, Tuolumne County	25	08
Register of Mines, with Map, Yuba County	25	08
Register of Oil Wells, with Map, Los Angeles City	35	02
Map of Mother Lode	05	02
Map of Desert Region of California	10	02
Map Showing Copper Deposits in California	05	02
Map of Calaveras County	25	03
Map of Plumas County	25	03
Mineral and Relief Map of California	25	05
Map of Forest Reserves in California (mounted)	50	08
Map of Forest Reserves in California (unmounted)	30	06
California Mine Bell Signals (cardboard)	05	02
California Mine Bell Signals (paper)	03	02

Samples (limited to three at one time) of any mineral found in the State may be sent to the Bureau for identification, and the same will be classified free of charge. It must be understood, however, that *no assays, or quantitative determinations, will be made.* Samples should be in lump form if possible, and the outside of package should be marked plainly with name of sender, postoffice address, etc. A *letter* should accompany samples, and a *stamp* should be inclosed for reply.

LAW RELATING TO MISREPRESENTATION OF MINES BY ANY OFFICER OF A CORPORATION TRANSACTING BUSINESS IN CALIFORNIA.

SECTION 1. Any superintendent, director, secretary, manager, agent, or other officer, of any corporation formed or existing under the laws of this State, or transacting business in the same, and any person pretending or holding himself out as such superintendent, director, secretary, manager, agent or other officer, who shall willfully subscribe, sign, endorse, verify, or otherwise assent to the publication, either generally or privately, to the stockholders or other persons dealing with such corporation or its stock, any untrue or willfully and fraudulently exaggerated report, prospectus, account, statement of operations, values, business, profits, expenditures or prospects, or other paper or document intended to produce or give, or having a tendency to produce or give, to the shares of stock in such corporation a greater value or less apparent or market value than they really possess, or with the intention of defrauding any particular person or persons, or the public, or persons generally, shall be deemed guilty of a felony, and on conviction thereof shall be punished by imprisonment in State prison, or a county jail, not exceedings two years, or by fine not exceeding five thousand dollars, or by both.

SEC. 2. All Acts and parts of Acts in conflict with this Act are hereby repealed.

Approved March 22, 1905.

To avoid fine, this book should be returned on
or before the date last stamped below

10M—6-38

Stanford University Libraries
3 6105 006 126 176
622.06
C153
no. 46
cop. 2
537095